

**SPACE:
Industry's
New
Frontier**



Soon open for business— the world's first reusable Space Transportation System.

In 1979, a spaceship will be launched from the Kennedy Space Center, inaugurating a brand-new era in space operations: routine Space Shuttle service in the 1980s for American and foreign customers. Private enterprise will be most welcome.

This spaceship is one of a fleet of Space Shuttle orbiters now being built for NASA at the Space Division of Rockwell International. It will take off like a rocket, haul cargo to and from Earth orbit like a truck, and land like an airplane. The orbiter's 15-ft.-diameter by 60-ft.-long cargo bay will carry up to 32½ tons — about twice the payload and at half the cost of today's largest rockets. After two weeks on the ground for refurbishment and reloading, an orbiter will be ready to go to work again. And every orbiter in the fleet will be built to fly more than one hundred missions.

Look who's doing business in space already.

Communications satellites built and/or operated by Western Union, RCA, Comsat General, Hughes, General Electric and numerous other firms are in Earth orbit today. They're providing various telecommunications services to private businesses, government agencies, universities and scientific organizations around the world.

Man-made spacecraft are also doing various other jobs that are best accomplished from Earth orbit. Space-based sensors today are measuring the Earth's surface for signs of oil, natural gas and coal; monitoring weather on a worldwide, day-and-night basis; providing detailed land surveys and crop inventories; and pinpointing the sources of air and water pollution. Obviously, a great many people are already taking advantage of the great natural resource called space.

That's only the beginning.

The advent of the NASA Space Transportation System (STS) promises to be of critical importance to the business world — and the products and services it provides. With the Shuttle, bigger, more sophisticated systems can be put into space, serviced in space, and brought back from space at an affordable cost.

So, it should come as no surprise that many American and foreign businesses have already reserved cargo space for the earliest orbiter flights, on an experimental basis. These charter customers include: Johnson & Johnson, Dow Chemical, Ford Motor Company, Jay Robinson Aviation, the Yomiuri Shimbun, Intermetrics Inc., Odetics Inc., the Comsat/IBM/Aetna consortium — and, of course, Rockwell International.

In 1980, the Space Shuttle will introduce a new kind of laboratory facility into Earth orbit: the Spacelab. Also on the trip will be the scientists, engineers and technicians needed to set up and operate the lab for many projects, including experimental manufacturing in space.

Industrial specialists in Earth orbit will be able to make the observations, conduct the experiments and develop the new manufacturing processes that are not possible on the Earth's surface. For example: levitation melting in space (containerless melting) has several unique benefits. Container contaminants are eliminated, alloys of ordinarily unmixable materials can be developed, and gases injected into molten metals can produce steel as light as balsa wood. Also, flawless large crystals can be produced in space for improving tomorrow's electronic systems and large-scale integrated circuits. And since there is no convective heat motion in space, materials can be separated by using the force of their electrical charges. This can lead to high-yield, low-cost techniques for producing medical materials such as urokinase (an anticlotting compound), isoenzymes (for diagnosing bodily disorders), and insulin (for treatment of diabetes).

By 1990, the STS may be hauling materials for factories in space, and forward-looking manufacturers will have begun capitalizing on their own space-produced materials and products. The large-scale orbiting structures of later years will offer numerous benefits to man on Earth. For

example, there may be large-scale orbiting solar plants — huge, lightweight facilities capable of converting pure sunlight into electric energy, then microwaving it down to Earth.

Rockwell can fit you in.

For your convenience, Rockwell International is operating an STS User Service Center that can answer your questions and help you begin the planning necessary to take advantage of the opportunities in space.

For openers, we can tell you all about the Small, Self-Contained Payload (SSCP) — a small R&D payload of your own design and manufacture that can be taken into space for as little as \$3,000. We can assist you in the manufacture of an SSCP, or design and build complete space systems to your specifications. In short, we are familiar with all aspects of becoming an STS customer, and can assist you in determining which of the many ways to utilize the Shuttle is best for your particular needs.

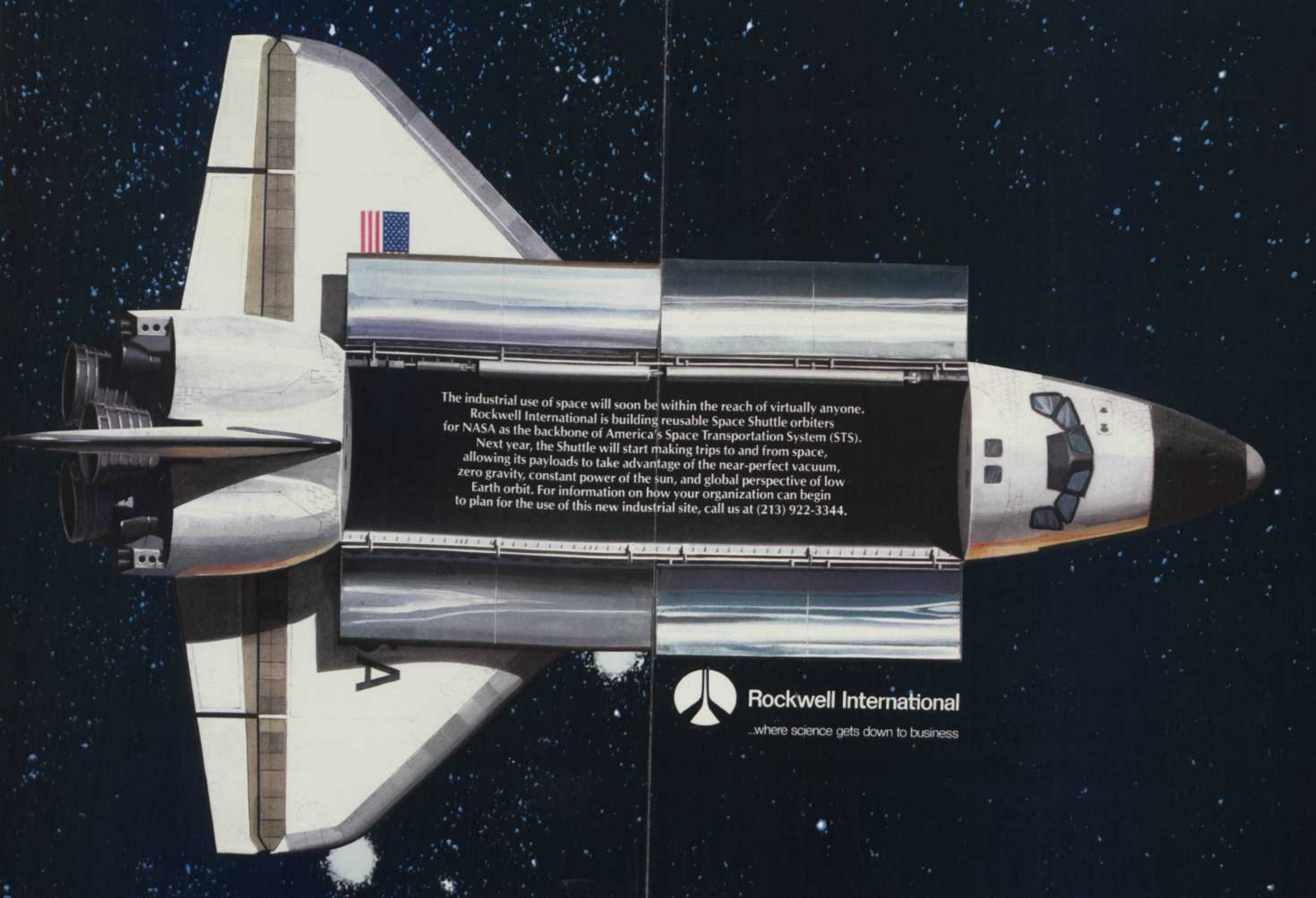
For assistance in planning to use the Space Transportation System, or simply to get more information, just call us: the Rockwell STS User Service Center, (213) 922-3344. Or write us, using the coupon below. **If you have business in space, you should be doing business with Rockwell.**

STS User Service Center
Rockwell International —
Space Division
12214 Lakewood Boulevard
Downey, CA 90241

I am interested in:

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- ☐ Doing work with a cargo left in space by the STS.
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Phone _____
Product Line _____



The industrial use of space will soon be within the reach of virtually anyone. Rockwell International is building reusable Space Shuttle orbiters for NASA as the backbone of America's Space Transportation System (STS). Next year, the Shuttle will start making trips to and from space, allowing its payloads to take advantage of the near-perfect vacuum, zero gravity, constant power of the sun, and global perspective of low Earth orbit. For information on how your organization can begin to plan for the use of this new industrial site, call us at (213) 922-3344.



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Nation's Business is the "business advocate" magazine leading the effort to strengthen the vitality of the private enterprise system.

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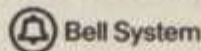
It gets eaten in 48 states and keeps 25 sales people busy on the telephone all the time. But before Ken Sather, President of the Sather Cookie Company, started selling all his products by phone, he wasn't doing one-twentieth as well.

Back then, Sather salesmen called on every account in person. And afterwards, Sather delivery trucks called on the same accounts with the baked goods. It amounted to two visits per sale, grossing the company about \$2 million a year.

But now, selling by Long Distance, the company has expanded tremendously and cut sales costs at the same time. Five hundred and sixty employees keep tons of cookies, candy, nuts and baking supplies continuously on the move to large national accounts, and Sather grosses over \$44 million a year.

Bell System Account Representative Dick McCallum helped bring about the change when he sold Ken Sather his first WATS line 12 years ago. He and other Bell Representatives have since added larger and larger equipment and provided telephone sales training to many Sather employees.

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goes wrong
for me...
somebody is
going to pay!"**

"They owe me!"

So who is this "somebody?"

It's "somebody" with plenty of money, an unending ability to pay.

This "somebody" has the responsibility to provide an extra *reward* to a person for his misfortune.

And "somebody" makes it easy for us as jurors (and even the judges) to overlook just who it is that's wrong, and base our decisions on the assumption that *any* injury or loss (real or imaginary) deserves payment. And maybe a substantial bonus as well.

So who is this benevolent "somebody?" It's *you!*

This growing "they-owe-it-to-me" attitude may be just fine with you. But if you want it to be America's standard, be prepared to pay the bill. In the form of higher taxes, higher prices for goods and services, higher medical costs. And, yes, higher insurance rates. So, keep your checkbook handy.

Because insurance is merely a means of spreading risk among many. So, when claims and

settlements go up, rates can only do the same.

This complex social issue and its impact on insurance rates cannot be resolved without an informed public. Since you are the ultimate paying party, you most certainly have the right to be informed.

If that's your wish, send for our "Enough is Enough" booklet. It's full of information on the issue, along with action steps to help you register your views where they count.

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Write The St. Paul for your "Enough is Enough" booklet. Or contact an Independent Agent or broker representing The St. Paul. He's in this, too, and wants to help. You'll find him listed in the Yellow Pages.

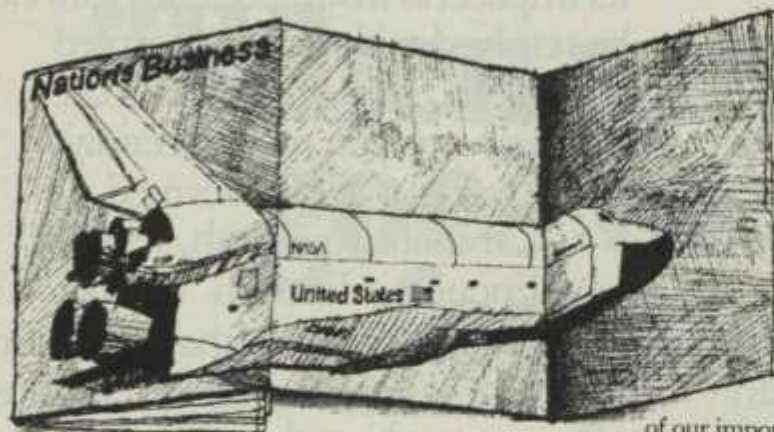
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With this issue, Nation's Business takes off as the most significant business magazine in the country.



NATION'S BUSINESS is already the world's best-selling business magazine.

Our ABC base circulation is 1,130,000 and soaring at the rate of more than 100,000 new paid subscribers a year. That's greater growth than all other business magazines combined—including Fortune, Forbes, Business Week and Dun's Review. Good, but not good enough.

NATION'S BUSINESS is committed to new heights of excellence. We've created new monthly columns, new slants on critical issues that affect today's business world, new feature stories, new human interest articles... all for the added benefits of our important readers.

And here it is. The new NATION'S BUSINESS.

Look at our striking February cover. See and sense the vitality that is the new NATION'S BUSINESS. With the space shuttle little more than a year from blast-off, America is leaping into a new era of space technology, the industrialization of space.

The shuttle's impact on America's business could be as profound as the first voyage of Columbus was to the world of 1492.

And NATION'S BUSINESS will tell the whole story in a 15-page feature on the incredible meaning of the new space age to private industry.

Each month, starting in April, we will do another incisive Special Report on a different American industry—Travel, Construction, Finance, Agriculture, Insurance, Lumber and Paper, every major industry in the country.

Each month we will include a new NATION'S BUSINESS Washington Letter, reporting on regulatory and legislative developments that may directly shape and affect our business readers' future.

Each month our new Business Lifestyle feature will explore another dimension of the business professional's life; how he or she "recharges the battery" through tennis, golf, photography, jogging—all the activities that keep the mind fresh and the heart pumping.

These new features—and more to come—reflect the kind of reader-advocacy attitude that we have at NATION'S BUSINESS.

NATION'S BUSINESS speaks for business. And published by the Chamber of Commerce of the United States, we know business.

Significant? For 1,130,000 subscribers, with more than 100,000 added annually, you bet it is.

Nation's Business
the "business advocate" magazine



The Nation's Business

WASHINGTON LETTER

► **THAT CONSUMER PRICE INDEX** you hear so much about is heading for revision.

It is important because hundreds of collective bargaining agreements are tied to it for employee salary raises. Change could affect contracts covering as many as 8.5 million workers.

Bureau of Labor Statistics kicked off change in January to improve statistical system and will double-track new index with old for six months.

In July, new index could become final with old one thrown out.

► **WHOLESALE PRICE INDEX**--in use since 1914--will be de-emphasized.

In its place: Finished Goods Index.

Reason for switching: BLS explains that Wholesale Price Index counts some price changes twice, and this affects inflation statistics business analysts use to track economic trends.

Finished Goods Index is updated about first of each month.

► **LANDMARK LEGAL CASE** awaits decision by Supreme Court on whether or not OSHA inspectors can enter plant premises without search warrants.

Case, based on lower three-judge decision that OSHA must have warrants, stems from small businessman in Idaho who denied access to OSHA inspector. Chamber of Commerce of the United States has entered case on side of Idaho businessman.

Decision expected this year.

Meanwhile, turn to page 48--"What to Do When OSHA Inspector Knocks."

► **PEOPLE WHO KNOW** tell us President Carter's choice to head Federal Reserve Board, Textron chief executive G. William Miller, will be somewhat more liberal in monetary policy than out-

going chairman. But don't expect major upheavals.

Reason? It's important to maintain smooth flow of money in these critical times.

Jerky policy could upset thin line between inflation, recession. Smooth operation critical to confidence of money people, business.

► **WHAT ARE PEOPLE TELLING** their elected officials these days?

In our scouting around Capitol Hill, we asked 20 senators about their mail--minisurvey.

Biggest across-the-board issue is Panama Canal treaties, with most letters opposing ratification.

One West Coast senator has received more than 100,000 letters on Panama.

Insiders tell us much of the opposition appears orchestrated.

► **WATCH TEN TOP ISSUES** in Congress this year.

These will impact on business--your business, whether large or small.

► **1. LABOR LAW REVISION**--

Union effort to gain more clout for organizing workers. Bill would punish business for resisting union drives.

Passed House; Senate committee action ongoing; floor action expected soon, possibly this month.

► **2. TAX REDUCTION AND REVISION**--

Major implications for business, could hurt your ability to earn profit.

Businessmen's perspective: While suggested tax reduction would be welcome, National Chamber's tax experts feel reduction should be larger to help spur economic growth more.

Important need: More incentives for

business to provide dollars for job-creating investment. Instead, watch for some business tax breaks to be axed. Look for action by spring.

► 3. HUMPHREY-HAWKINS FULL EMPLOYMENT--

New proposal, changed from last year's version, seeks jobless rate of four percent, but offers no solid objective for inflation control.

Proposal also emphasizes national economic planning, to which business has objections.

House action ongoing. Watch for Senate hearings this month or next.

► 4. WELFARE REFORM--

Could be very costly. Proposals seek one million-plus public service jobs, income supplements.

House action ongoing. Senate subcommittee hearings set this month.

► 5. CONSUMER PROTECTION AGENCY--

Nader forces feel momentum gaining to bring issue before House. Senate action hinges on House.

Legislation ready for floor action in both bodies. But opposition from large cross section of public may keep proposal bottled up.

Reason: Many voters oppose another federal agency setting more rules on top of rules.

► 6. PROTECTIONISM--

Unions press for protectionist measures to regulate imports.

Note: AFL-CIO makes big noise about need to protect jobs in this country.

Watch for proposals by labor-friendly congressmen.

Important item to keep eye on.

► 7. ALASKA LANDS LOCKUP--

Passage of present legislation on this would greatly expand Alaskan wilderness area, preclude economic development of land there.

Issue before several Senate and House committees. Action ongoing.

► 8. DIVESTITURE--

Numerous bills address this issue, initially focused on breaking up oil

companies. Outcome could set precedent.

Action in both Senate and House now ongoing.

Important area to watch.

► 9. HATCH ACT REVISION--

Restrictions on political involvement of federal workers would be eased under this legislation.

House has already passed measure; more action expected in Senate soon.

► 10. CONGRESSIONAL CAMPAIGN SUBSIDIES--

Taxpayer financing of Senate-House elections still viable threat.

Also, bill may amend federal election law to reduce allowable contributions by political action committees.

Watch for House committee action this month.

► AS NEW LEGISLATIVE PROPOSALS come up in Washington, write to us, tell us how issues impact on your business.

We'll try to track down answers for future reports in Nation's Business, keep you informed and up to date.

► GOVERNMENT MANPOWER DELIVERY systems play important role in smooth operation of American business.

But watch what happens with two of the big ten issues: Humphrey-Hawkins full employment and welfare reform.

Those two issues, plus renewal this year of the multibillion-dollar public service jobs program, the Comprehensive Employment and Training Act, are all tied together.

And they may impact on government employment systems, which provide workers for employers and certify eligibility of workers to draw unemployment compensation which employers pay.

► ITEM: Only 22 percent of American public supports passage of law to make union organizing easier.

In fact, one fourth of public feels there should be law to make union organizing more difficult.

These are results of very recent poll by prestigious Opinion Research Corp.

See details on page 74--"Where Public Stands on Union Power Grab."

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Westinghouse

New Clean-Air System for Coal-Burners

In a process that resembles household vacuum cleaning, a fiberglass fabric filtration system makes it possible for coal-burning industries to reduce ash pollutants by more than 99 percent, according to independent tests conducted by the Environmental Protection Agency and the Electric Power Research Institute.

The filter system contains a grid of specially woven and treated bags of fiberglass fabric. It can be used with any coal-fired steam boiler that generates electric power or heat.

Fabric specialists of Owens-Corning Fiberglas Corp., Toledo, Ohio, say the bags will enable many utilities and industrial firms to switch from oil and natural gas to coal without exceeding environmental standards. Scrubbers and electrostatic precipitators are fre-

quently used at present to meet environmental standards.

At Colorado-Ute Electric Association, a rural power company in southwestern Colorado, the EPA and EPRI tests found that the West's first fully operational bag system has a collection efficiency of up to 99.92 percent.

The Tennessee Valley Authority has chosen a bag filtration system for its coal-burning Shawnee steam plant. The plant now has electrostatic precipitators on each unit, which give a 98 percent ash collection efficiency. The 1972 Clean Air Act mandates a 99.5 percent efficiency.

The filter system consists of pressurized chambers where ash-laden boiler exhausts are forced through a network of 35-foot-long fabric tubes. Ash collects on the fabric surface, and clean

air passes through to the open. Designers of the system say that once a proper ratio of fabric to the volume of dirty air is determined, the fabric maintains an almost constant collection efficiency, regardless of coal type and size of particles being collected.

Owens-Corning says the system is less expensive to operate than scrubbers or electrostatic precipitators, except in the case of high-sulfur coal, where costs are comparable.

Experience at Colorado-Ute has shown that the comparatively small bag system for a 39-megawatt generating station costs around \$2.6 million, or about \$666 per kilowatt.

Fiberglass, an inorganic substance, is corrosion-resistant and will retain its strength and dimensional stability even when woven and sewn into the long tubes and mounted vertically in the pressurized chamber. As was shown in the Apollo space program, fiberglass fabric retains its properties even at 550 degrees. •

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THE PLACE TO BE
FOR BUSINESS

Franchisers Expect Five Percent Growth

Sales by the nation's franchised outlets are predicted to grow at a real rate of five to 5.5 percent this year, allowing for a six percent adjustment for inflation.

Edward Kushell, chairman of the International Franchise Association, a Washington, D.C.-based trade group, says sales by franchising companies, which reached \$238 billion in 1977, are expected to rise to approximately \$272 billion in 1978.

The latter figure would be about one third of all retail sales. •

Air Service to Spread to More Communities

More smaller communities can expect to have air passenger service in the future, the Federal Aviation Administration advises.

FAA estimates that commuter airlines will carry 13.9 million passengers



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269,440 sq. ft. Brick and steel. 12-18 ft. ceiling, 77 acres. Natural gas, 100% sprinklered. Rail. Community size: 54,000. Eastern Region.

BUILDING #M2-143

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62,400 sq. ft. Steel, 11 ft. ceiling, 7.3 acres. Natural gas. Rail. Community size: 7,000. Western Region.

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12,880 sq. ft. Metal and brick, 16 ft. 6 in. ceiling, 5 in. concrete and carpeted floor, 4 acres. Natural gas, loading docks. Rail. Interstate highway. Community size: 142,490. Piedmont Region.

BUILDING #M2-126

44,300 sq. ft. Steel, 20 ft. ceiling, 20 acres. Natural gas. Rail. Community size: 5,000. Piedmont Region.

BUILDING #M2-127

44,500 sq. ft. (3,000 sq. ft. office). Brick and steel, 20 ft. ceiling, Rail. Community size: 9,200. Eastern Region.

These are just a sample of the exceptional existing plant facilities available for immediate occupancy in North Carolina. For specifics or more information on other buildings or sites, write: N.C. Department of Commerce, Industrial Development Division, 430 N. Salisbury Street, Raleigh, N.C. 27611. Or call (919) 733-4151.

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PRIDE is a private, non-profit organization of regional communities, business professionals and civic leaders dedicated to helping expanding businesses locate in areas best suited to their needs. PRIDE Territory covers 10,000 square miles of beautiful northeastern Wisconsin—an area that abounds with year-round recreation opportunities, plentiful resources, excellent schools and many modern health care facilities.

annually by 1988 and that 2.2 million of these will be flown from low density points not now serviced by certificated air carriers. Commuter airlines last year carried a total of 5.9 million passengers.

Last year there were 130 commuter operators flying 450 small aircraft, many of which are single-engined. The commuter lines served 423 communities. By 1988, FAA says, commuter operators will have 830 aircraft, most of them multi-engined and turbine-powered, and will serve an estimated 550 communities. •

Chemical Firms Spend More on Environment

The chemical industry's investment in environmental facilities grew 50 percent in the past two years and should double within the next three years.

Companies that are members of the Manufacturing Chemists Association had spent \$3.3 billion through 1976 for environmental facilities. This amounts to 8.5 percent of the total capital invested in chemical manufacturing facilities. The association estimates that the firms are spending more than \$1 billion annually to meet environmental requirements.

An association survey found that \$1.8 billion had been spent for water pollution control through 1976. Expenditures in this category are expected to rise to \$3.7 billion by 1979.

Air pollution control facilities cost the industry \$1.3 billion through 1976, and spending on them is predicted to increase to \$2.6 billion by 1979. Solid waste management costs, which had totaled \$200 million by 1976, are expected to double by the end of 1979. •

Chinese Are Shooting for Engineering Gains

The Red Chinese are trying to make a great leap forward in engineering technology, aiming for parity with the United States by the year 2000.

That assessment is from Dr. Robert M. Saunders, president of the Institute of Electrical and Electronics Engineers, who recently headed a ten-member IEEE delegation to the People's Republic of China. The group visited a variety of industrial and educational facilities.

The delegation's opinion: "If the rate
continued on page 92B

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A LOOK AHEAD FROM WASHINGTON

Justice Department Proposes Antibusiness Bounty Hunters

The Justice Department, in a move reminiscent of the old West, is proposing a bounty for people who successfully sue business firms. Such bounties are part of a draft bill the department is circulating in the private sector for comment. The bill would greatly revamp procedures for class-action damage claims under federal law.

The measure's emphasis is on consumer class-action suits involving damages of less than \$500 for any individual, such as might arise under securities, truth-in-lending, equal employment opportunity, and antitrust laws.

In these small suits the federal government, under the bill, would be permitted to sue for a penalty or fine and distribute monies to the allegedly injured parties. Anything not claimed by individuals would go into the U. S. Treasury. Presently the federal government doesn't initiate class-action suits on behalf of private individuals.

If the government does not choose to file a suit, a private citizen could step in and sue in the government's name. The individual would get a \$10,000 bounty if he won the suit.

And there is more. Under present statutes, the plaintiff in a class-action suit has to notify all concerned in the action and prove individual claims. The bill would eliminate these provisions, both for the government and the private citizen, in suits with claims that do not exceed \$500 per individual.

It is expected that, when the bill is in its final shape, there will be some relaxation of these requirements in larger suits, too.

Tougher Policy Proposed on Government Consultants

The Carter administration is close to fixing a policy on the federal government's hiring of consultants that, among other things, is aimed at putting a stop to "revolving door" abuses.

Such abuses, President Carter said in a memo to executive agencies last May, occur when former government employees "may be improperly favored for individual or contracted consulting arrangements." He ordered a full-scale review of the consulting process.

The President noted that outside experts and advisers were being used "excessively, unnecessarily, and improperly." He cited a Senate subcommittee survey that found more than 30,000 federal consulting contract arrangements and 10,000 individual appointments of consultants, plus questionable use of grants to obtain consulting services.

Under the new policy, which is open for public comment through Feb. 10, favoring former employees and the use of grants to hire consultants is forbidden.

Also, consultants cannot be used to make policy or management decisions, can be used only on an intermittent or temporary basis, and cannot under any circumstances be used to influence legislation.

Further, consultant services cannot be used as a device to bypass or undermine federal personnel ceilings, pay limitations, or competitive employment procedures. In the case of consultant contracts, new guidelines call for competitive awards wherever possible, "to ensure that costs are reasonable."

FTC Drops Proposal to Reveal Identities

The Federal Trade Commission has decided to drop its proposal to routinely divulge the names of persons under investigation and stick with the present policy of general nondisclosure.

Last April, FTC tossed out the proposed change for public comment. According to the agency, 54 comments were received. Among them were objections which were convincing enough to cause the agency to drop the idea.

Business comments were marked by objections to disclosure of names of those under investigation because of the possibility of severe economic injury even before the commission determines that fair trade practice laws have been violated, as it does when it issues a complaint.

The commission will continue to disclose industry-wide investigations. Also, it will continue to disclose individuals' identities in three sets of circumstances. FTC will identify investigated parties where the cases involve significant risk of economic harm or risk to public health or safety, disclose motions to limit or quash investigation subpoenas, and reveal the applications of former FTC employees for clearance to represent companies under investigation.

Small High-Technology Firms in Capitol Spotlight

Innovative small firms are to get more attention this year on Capitol Hill, both in hearings to be held by the Senate Small Business Committee and in legislation designed to alleviate the venture capital problem.

Sen. Gaylord Nelson (D.-Wis.), chairman of the Senate panel, has expressed concern over tax and capital formation policies that have made it increasingly easy for foreign corporations to take over small high-technology firms. His committee will hold hearings to develop solutions.

At the end of the first session of Congress, Sen. Lloyd Bentsen (D.-Texas) introduced S. 2363, The Venture Capital Tax Reform Act, which would amend the Internal Revenue Code of 1954 to improve the investment climate and "help remove artificial incentives for new firms to sell out to giant corporations."

His bill calls for creating a new category of stock, called venture capital stock, that would have more favorable tax treatment; stock option incentives for this type of stock to attract good management; increasing net operating loss carry-forward from the present seven to ten years for new businesses; increasing corporate surtax exemptions for such firms from the present \$50,000 to \$100,000; and, in a move to encourage entrepreneurs, extensive loosening of the existing limitation on deductions for interest on investment indebtedness. The limitation now is \$10,000.

New Antitrust Panel Could Mean Trouble for Business

Business is enthusiastic about the Carter administration's announced intention to abolish a lot of unnecessary commissions. But business is reserved about creation of a new one—the National Commission for the Review of Antitrust Laws and Procedures.

The President announced the 15-member commission's establishment on Dec. 1, but by the turn of the new year he had named only two members. Asst. Atty. Gen. John H. Shenefield, who heads the Justice Department's antitrust division, will be one, as will Federal Trade Commission Chairman Michael Pertschuk. The President also will pick another agency head, five members from the private sector, and one U. S. district court judge. Congress will provide three members each from the House and Senate. From among the 15, the President will pick a chairman.

The commission is to take a sweeping look at present antitrust laws and, six months after the last member is appointed, is slated to end its investigation. Thirty days later, it is to make a final report to the President and the Attorney General. Thirty days after that, the commission is to self-destruct.

Antitrust experts representing businesses and business organizations are withholding official comment, but there is apprehension in business circles that the commission will be guided more by politics than economics.

One example: The commission might recommend some kind of breakup or restructuring of all major industries such as that now proposed for the petroleum industry by Sen. Edward M. Kennedy (D.-Mass.), Rep. Morris K. Udall (D.-Ariz.), and others in Congress.

Experts believe it will be almost impossible to complete such a vast study in time to get it back to the President in seven months. And any legislative action is, at the earliest, a year or so away, giving business months to start building a defense.

Product Safety Agency May Rely on Voluntary Standards

The Consumer Product Safety Commission, after many months of consideration, appears to be adopting a policy of relying extensively on voluntary standards for products rather than developing mandatory standards.

"We simply don't have the resources to go the mandatory standards route," says Commissioner Barbara Franklin.

The commission generally considers voluntary standards as complementary to and not a substitute for mandatory standards. But the agency also acknowledges that there are many situations in which adequate voluntary standards, in combination with independent certification programs, may "support a conclusion that a mandatory standard is not necessary."

Such a situation existed on Jan. 5 when the commission elected to go along with voluntary standards for hand-held hair dryers. This decision, Commissioner Franklin believes, will be an incentive to manufacturing groups to develop voluntary standards for other products.

National Railroad Policy Through 1985 Taking Shape

The future of the nation's railroads will be thrown open to public debate next month by the Federal Railroad Administration.

FRA has released a new study on rail policy that was ordered by Congress in the Railroad Revitalization and Regulatory Reform Act of 1976. The study covers long-range problems and railroad industry prospects through 1985.

Among the areas examined are current conditions, capital needs through 1985, financing by private and federal sources, and the effects of federal rail policy on other modes of transportation. □

What It Costs Washington to Do the Job

Your article, "One Way to Shrink Government Employment" [December], reports on the latest effort to establish standards for contracting out work to private firms rather than having the work done by federal employees. These standards are to be based primarily on comparative costs.

The costs include the Office of Management and Budget's estimated costs for retirement of federal employees, and an issue is made out of how these OMB estimates are arrived at.

OMB, however, apparently ignores other costs, which are far more influential in determining the entire cost of a program. Those are overhead costs, about which government accountants appear to be completely in the dark.

For example, paid time off alone—annual leave, sick leave, and holidays—for government employees represents about 18 percent of salary costs and ranges even higher for longtime employees who are getting maximum annual and sick leave allowances.

There are also the costs of buildings, including rents or depreciation, heat, light, and maintenance. There are desks, typewriters, duplicating machines, and dozens of other items not considered in direct costs as salaries.

Unless these are taken into account, there is no way OMB or anyone else in government can possibly arrive at a fair cost comparison.

The most efficient of service companies generally run 50-75 percent overhead costs (percentage of direct labor), and many run higher. It is doubtful that any government agency is more efficient in managing indirect costs.

Unless OMB can manage, in some way, to arrive at a reasonable estimate of indirect costs within each agency, there is no way to make a reasonable cost comparison.

HERMAN R. HOLTZ
Government Marketing News, Inc.
Washington, D. C.

Emphasis on engineering

"The Growing Furor Over Noise Regulations" [October] fails to state the case adequately for the govern-

ment emphasis on engineering control of noise. As a practicing industrial hygiene engineer for many years, I have found that the use of personal protective equipment is not a viable solution for a quieter work environment.

The reasons are:

- Poor acceptance of personal ear protectors by workers.
- Relatively poor seal integrity of these devices, which allows leakage into the ear.
- Relatively poor protection provided by these devices against low frequency noise that is predominant in the workplace.
- Bypassing of ear protectors by very high intensity noise, which enters the body via the skeletal system.
- Absence of an effective hearing conservation program for the majority of American businesses.

The numbers game is easy to play when industry discusses the costs of meeting a lowered noise level. The lack of substantive data to support such horrendous cost figures does not enhance management's credibility when it uses these to block adoption of the lowered noise standard.

MEIER SCHNEIDER, P. E., C. I. H.
Industrial Hygiene Engineer
Los Angeles, Calif.

Making traveling bearable

I have shared many of the unfortunate experiences covered in your recent, interesting James J. Kilpatrick column, "Making Life More Bearable for the Traveler" [December].

Business goes where invited and stays where it is appreciated most. This is one free enterprise objective we fellow travelers have, or should have, in common.

J. R. MELLETT
President
Braun-Brumfield, Inc.
Ann Arbor, Mich.

Why not a "Kilpatrick Guide" to hotels?

For the past six years, I've done a great deal of travel as publications and legislative chairman of the American Academy of Family Physicians and for the Department of Health, Education, and Welfare on the National Advisory

Council for Health Professions Education.

Mr. Kilpatrick is a man many can trust. A Kilpatrick Guide would be so successful as to make the Michelin Guide in France pale by comparison.

WILLIAM H. HUNTER, M. D.
Clemson, S. C.

SBA and free enterprise

When a magazine such as NATION'S BUSINESS runs an article like "Businesswomen Get a Champion at SBA" [December], it is time we all reevaluate what a pragmatic capitalist venture is.

Your article quotes Patricia M. Cloherty, deputy administrator of the Small Business Administration and head of SBA's Women's Business Ownership Campaign, as saying the campaign will offer "a combination of management assistance, financial assistance, advocacy, and assistance in securing federal contracts."

Is it a business venture when we rob the taxpayers to support guaranteed loans, while many thousands of persons in this country have come up in the business world by hard knocks, blood, sweat, and tears?

What was guaranteed to them?

This article should be appalling to anyone believing in the free enterprise system. This is just one of many such articles that smell of nationalization, socialism, or, in effect, the destruction of America's free enterprise system as we have known it.

TOM DONDLINGER
Dondlinger & Sons
Construction Co., Inc.
Wichita, Kans.

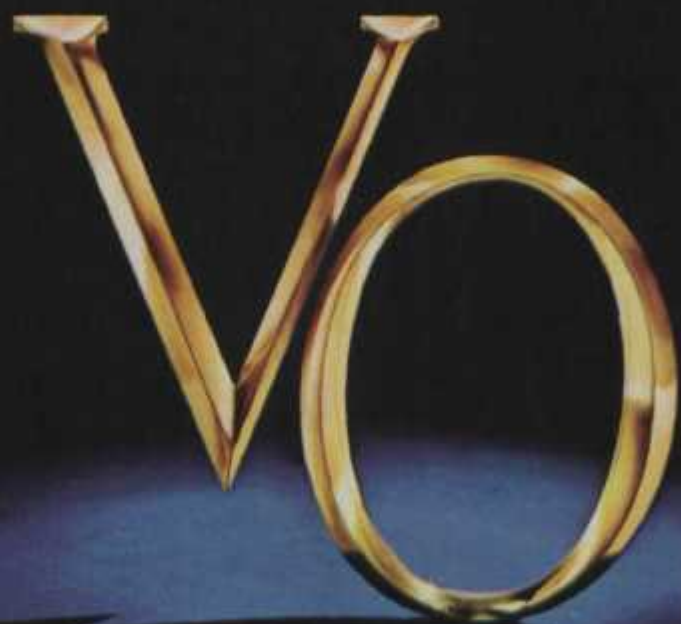
Congressman Crane's bill

I read with great interest the article entitled "A Weapon Against Abuse of Government Power" [November].

I have developed just such a weapon, and it is about to receive formal congressional scrutiny.

My legislation, H. R. 1817, will require the U. S. government to compensate businesses and individuals for reasonable legal expenses in cases where the government files a civil suit against that party and loses. This bill

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There are many reasons to make your Cadillac decision soon. Cadillac craftsmanship. The Cadillac name. Cadillac resale value. The confidence in knowing that Cadillac is America's most sought-after luxury car, by a wide margin . . . year-in and year-out.

As you turn to steal a second look, you know the time has come . . . time to keep that promise to yourself and see your Cadillac dealer.

Cadillac 

would give individuals a fighting chance against federal government suits and, it is to be hoped, induce the government to reflect more upon the merits of a case before filing a court action.

PHILIP M. CRANE
Member of Congress
12th District of Illinois
Washington, D. C.

Emergency planning

Your article, "Risk Management: New Ways for Business to Insure Against Loss" [November] was very enlightening.

I agree that a comprehensive protection plan is absolutely essential for long-term survival of any business today.

A protection plan, however, is incomplete if it does not provide procedures and training on how to manage an emergency, if it ever occurs. Such an emergency-response plan is critical because proper anticipation and planning assures that, when an emergency occurs, many of the actions (and resources) are brought into play automatically.

Since an emergency response plan involves training and voluntary cooperation of the personnel, it also offers side benefits of improving employee safety consciousness and morale.

SURESH GAJWANI
Vice President and General Manager
Security Products Division
Federal Signal Corp.
Hinsdale, Ill.

When building an image

As a manufacturer of inks for genuine engraved stationery, I was most interested in the item in "Executive Trends" [December], "Building a Better Corporate Image."

I was rather dismayed at the fact that genuine engraving was barely mentioned in this regard, and only as an afterthought at that.

While I admit to bias, I cannot understand how anyone can speak with authority about letterhead design, quality, and prestige while hardly mentioning the acknowledged and undisputed finest process of all.

PETER N. ANDERSON
President
Buzz Sales Co., Inc.
Crystal Lake, Ill.

Business and government

The November issue of *NATION'S BUSINESS* reported several instances of federal agencies' use of power against business with no fear of being called to account.

It seems that industry's best efforts are met with suspicion and accusations of wrongdoing. It's as if we are being encircled by a pack of wolves which, on the slightest provocation, will lunge for our throats.

Can there be any good reason for us to continue the struggle?

Why don't we just cut back or discontinue as much of our efforts as we can?

The welfare crowd won't work at all, and they seem to fare about as well as most who do work.

MARVIN E. RICHARDSON
Owner-Manager
Mississippi Time Instruments
Jackson, Miss.

What upsets me about some of the letters and articles I find in the major magazines is the sloppy thinking of those who are the more influential in our society.

Many businesses have such a strong ideological prejudice against government that their bias is frightening.

Government is actually very slow to act and acts only because of the irresponsibility of business or because businesses want government to act.

There are some legitimate problems in how to use government when we

can't get rid of our sewage, run out of water or energy power, or pollute our rivers and skies.

Thomas Jefferson feared big government because he thought it would be used by the manipulators, all seeking private profits.

Will the influential business community please get realistic, so we can face some of the actual problems of the role of government?

Antigovernment hysteria prevents us from facing real problems.

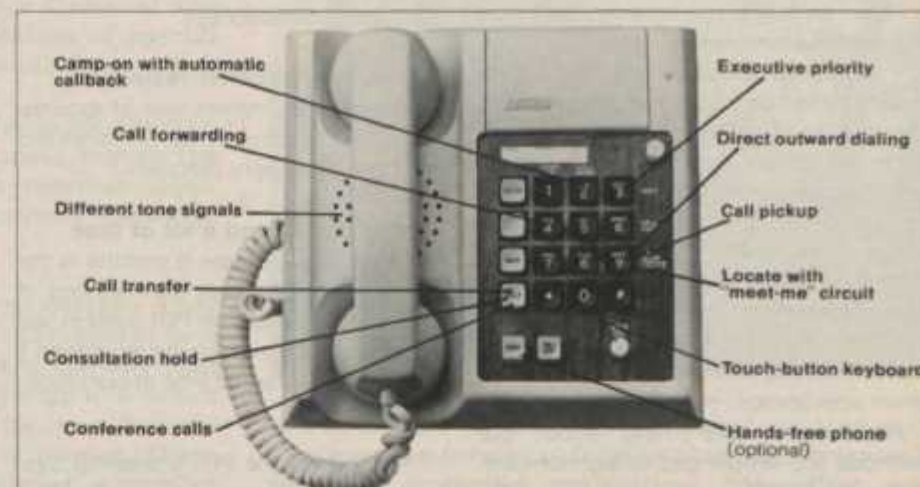
A. L. PENDERGRASS
Salinas, Calif.

Is it inconsistent to condemn government regulation as one of "Steel's Five Big Problems" [November] on one hand, while calling for strict enforcement of the 1974 Trade Act? Doesn't the act set forth nothing more or less than trade regulations?

Yet this is what William C. Verity, chairman of Armco Steel Corp., is reported as urging to help cure his industry's problems.

Management and managers had better face the issues on a free enterprise basis without seeking more and more government intervention.

DOUGLAS A. KAISER, C. P. A.
Kirkland, Wash.



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I'm speaking of an entirely new approach, a method that makes job changing *"faster"* than ever.

In development for many years, and with over \$2,000,000 invested, we have recently completed some very significant innovations.

In the past, exposed to just some of our ideas, Personnel Magazine said we had a *"job hunting breakthrough,"* and Business Week called one of our products *"an indispensable aid."*

However — the best part about our entire Marketing System is what it can quickly do for an individual.

We have proven that many people who use our System can develop 25 to 30 people interested in them for quality positions.

Importantly, this can be achieved with both dignity and confidence.

Now, perhaps you're wondering just why our System works.

It's effective because it's a different approach based on fresh new concepts. We are not an Employment Agency, and we're not Career Counselors. As Corporate Outplacement Consultants there is no firm in the country that has anything like what we have.

With our Marketing System it's possible for people to get "interviews" in virtually any field and at any level. And that includes meeting with presidents and VIP's when appropriate.

Additionally, everything about our methods are simple and straightforward. While we do different things as we tailor our services to each individual, in most cases you will have none of the concerns that tend to restrict most job hunting efforts. For example,

1. You don't need to be a writer.

That's because our own ad agency can develop the greatest job-getting letters and resumes that are possible with your background. They will be outstanding and guaranteed to your satisfaction.

2. You don't need contacts.

That's because we can provide them. Here we'll make use of an incredible EDP system... the most sophisticated information network of its kind.

3. You don't need to read want ads.

That's because our researchers can read every major paper in the country for you. Our accuracy insures that almost every advertised opening will be brought to your attention.

4. You don't need Agencies.

We can identify all the top Agencies that you might wish to contact... but with our System, these sources are not critical to your success.

5. You won't scatter resumes.

Our system makes use of ingenious, little-known and targeted methods. It is very precise.

6. You don't need a lot of time.

Most people waste 6 months in the job market using ordinary methods. If you wanted to use the PDI System, we would probably not require more than 1 day of your personal time at our office.

What does the PDI Marketing System require?

Well, to make our System work, you'll probably have to change. You will have to forget your old job hunting methods, have an open mind, and

then implement some bold, new approaches.

The biggest thing you'll need is self-confidence. You'll have to be open to meeting top people, and then *do what we advise* about selling yourself.

However, if you're sincerely interested in new employment and you do these things... then whatever you seek — there is very little that can stop your success.

Certainly not age, sex, education, or even low present earnings.

We know. This is because we've already served thousands of people.

Now, there is no question that individuals can use our System to obtain major increases. But for most people money isn't the main thing.

People have praised our methods because it brought them things that were more important than money... exciting new careers... growth opportunities... the right location... and more job satisfaction.

Now, we don't mean to make this sound like it's for everyone, or that it works perfectly every time... and no one in the world can guarantee you a job, or even promise that you will do as well as others. But then again, you may do better.

In any event, if you really want a better job, and you want to do it less painfully and with more effectiveness than you ever thought possible, then here's what you should do.

Call any of our offices for an appointment. There is no cost or obligation and naturally confidences are respected.

At that time we'll be glad to review our revolutionary System with you, and to show you what it can achieve in your situation.

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(at intersection of the Long Island Expressway and route 110)

The Farmer's Need for a Fair Return

ONE NIGHT not long ago a freezing rain was falling over Rappahannock County. I awoke in pitch blackness, somewhere around four in the morning, conscious of lights where there ought not to be lights. A glance confirmed my guess. It was Jimmy Falls in his pickup truck, driving across the pasture just beyond our fence. He had gone out to help a young cow which was having trouble giving birth to a calf.

I mention the incident not because there was anything unusual about it, but precisely because there was nothing unusual about it. Jimmy Falls is my neighbor. He is a strong, slender, level-eyed fellow in his early forties. He teaches Sunday School in the Woodville Baptist Church. He and his wife, Myrtle, operate her father's country store. Jimmy is a professional farmer, earning his living primarily from a modest cow/calf operation. His few hundred acres are small potatoes compared to the great ranches of Texas, New Mexico, and California; his investment doesn't touch the enormous investment one encounters on the farms of the Midwest; he has none of the problems of payroll and paperwork that must be handled on truck farms and vineyards.

But James H. Falls, of Rappahannock County, Va., shares with his brother farmers across the nation a common burden and a common need. They work like the devil; and relatively speaking, they get damned little for it.

AMERICAN FARMERS need understanding. They need what is known around our house as a little TLC—Tender Loving Care. On the day that Jimmy Falls was serving as obstetrician to a cow, a farmers' caravan was making its way toward Washington for a demonstration of protest. Down in Georgia and in parts of the Midwest, a number of farm spokesmen were talking strike. As it turned out, it was all kind of pathetic. The protesters were too polite to disrupt traffic; they stopped their tractors when the lights changed to red. The strike fizzled, as it was bound to fizzle. The nature of farmers and the nature of farming form an ineffective combination when it comes to waging economic warfare. Lo, the poor farmers! Longshoremen they are not.

Let me talk for a few minutes about the farmers. There are not many of them left. Over the past 25 years the number of farms has dropped from 5.2 million to 2.7 million. Today farm workers constitute less than four percent of our total labor force. Only about eight million persons live on farms, as the Census Bureau defines a farm, and the number drops steadily year by year.

These farm families, few as they are, work harder and longer than any other group in our economy. On the typical dairy farm, the proprietor knows no such thing as a day off; his cows have to be milked, morning and evening, seven days a week. In the South, they call tobacco the 13-month crop because something always needs to be done. In the Midwest, even in the depths of winter, when cropland is frozen, the work of maintenance goes on unceasingly. Machinery has relieved much of the manual burden, especially in wheat and corn and dairy operations, but a vast deal of hard physical labor remains. Much of that labor must be performed under miserable conditions—in mud or dust or brutal heat or sub-zero cold.

If it weren't for the machinery, the whole incred-



ible operation would collapse. Taking one crop with another, the farmer is forever planting, irrigating, pumping, spraying, cultivating, harvesting, and shipping. It is increasingly expensive to maintain and operate this machinery, and it becomes formidably expensive to replace it. Farm production costs have exactly doubled since 1967.

THE COMBINATION of hard work and fine machinery produces results that stagger the statisticians. No other sector of the economy approaches agriculture in terms of productivity gains. Hybrid seeds, effective pesticides, precisely compounded fertilizers, marvelously efficient facilities for poultry and beef and milk production—all these add up to an industry that performs superbly. American farms feed Americans to the point that obesity is our most universal affliction and dieting the most popular pastime. Farm exports provide our largest source of foreign exchange. No farmers in the

world achieve the levels of production that ours achieve.

In a recent address at Hillsdale College in Hillsdale, Mich., former Agriculture Secretary Earl Butz put some of the statistics in human perspective. As recently as 35 years ago one American farm worker produced enough food for himself and about nine other persons. Today one farm worker produces enough for himself and 50 other persons. On the most efficient farms, Mr. Butz said, a single worker produces enough to feed a hundred other persons.

What does all this mean to the consumer? Mr. Butz had some figures. As a nation, he said, we now get our food for a little less than 17 percent of our take-home pay, on average. This compares with 23 percent just 25 years ago, and the current figure demands a footnote: The 17 percent includes not only the meats, fresh fruits, vegetables, and canned goods that we buy in the grocery stores; it also includes all the frozen TV dinners and delicatessen items, and about one third of the cost of meals eaten outside the home.

"Because we spend only 17 percent of take-home pay for food," Mr. Butz observed, "we keep 83 percent to spend on something else or to save. That's why it's possible in the U. S. for more than 90 percent of our families to have a TV set and about half to have two sets; for some 85 percent of our families to have an automobile and more than 40 percent to have two cars; for nearly all of our families to have electricity, indoor plumbing, radio, and a host of other things and services that were anything but commonplace a generation ago."

MAKING SOME allowance for the enthusiastic rhetoric of a former Secretary of Agriculture, that's a fair picture of what farming means to the American consumer. What does it mean to the American farmer?

His income, on the average, has dropped every year for the past four years. The final figures are not in for 1977, but they probably will indicate total farm income about 40 percent below the banner year of 1973. Cattlemen did a little better last year, after four years of heavy losses, but other farmers had a rough time of it. Sen. William Proxmire, in a letter to his Wisconsin constituents, compared prices in the fall of 1977 to prices a year earlier: Wheat was down from \$2.88 a bushel to \$2.17, corn from \$2.60 to \$1.59, and soybeans from \$6.65 to \$4.81. The situation sometimes is explained in terms of parity, the legislative index keyed to the purchasing power of farm commodities in 1910-14. Farm prices in 1977 were at roughly 63 percent of the parity index, meaning farmers had the lowest level of purchasing power in 44 years.

That is what has been happening to the farmer on the income side. On the expense side, everything has been going up. The pickup truck that cost \$3,300 four years ago is \$5,650 or more today. The tractor that was \$10,800 is now \$18,800. Gasoline costs have almost doubled in this period; the ton of anhydrous ammonia that was \$92 in 1973 is \$188 today. Seeds, pesticides, fertilizers, spare parts,

fencing, labor—most of these expenses have gone out of sight. And the farmers, prisoners of their own productivity, are barely managing to survive in this inflationary time.

BECAUSE I live in a rural county, where farming is pretty much the economic be-all and end-all, I may not be wholly objective on these matters. We have been through two bad years in Rappahannock County, and these were bad years for different reasons. In 1976 our peach and apple growers had such bountiful yields that they scarcely could give their fruit away. In 1977 their orchards were caressed by balmy days in April and stunned by freezing nights in May; and the crop was ten to 15 percent of normal. This is how it goes. It is always easier to lament the bad years than to recall the good ones—and there have indeed been good years with good profits.

Short of total government subsidization, which no one wants to see, there is no way that farmers can be guaranteed a fair return on their investment every year. The production of food is certainly as vital to the economy as the production of electric power or the transportation of goods, but farming cannot be transformed into a regulated public utility. We cannot have rate hearings on corn as we have them on telephones. For good or ill, the free market has to be permitted to work its way.

What is needed, first of all, or so it seems to me, is a wider understanding of the farmer's need for a fair profit. Apart from the intangible values of country living, this is the only incentive he has to stay on the farm. Farming may not make much sense with profits, but it makes none at all without them. Nobody but a blockhead would, to mention only a single example, ever raise chickens unless he thought there was some money in it. But this understanding is far from perfect. Secretary Butz has been greeted by young protestors carrying puerile placards: "Food is for people, not for profit." To which the answer is: The hell you say.

Second, we ought to resist farmers' demands, born of the anguish of a few bad years, that government intrude more deeply into the marketing process. The feed grain legislation that becomes effective in 1978 is as far as we ought to go. It is all very well to talk of price supports, parity payments, set-asides, and outright subsidies in terms of stabilizing influences. A little stability is fine; too much can mean disaster.

FARMING has to stay risky. There is no other way the industry can operate, because nature can be controlled or moderated or compensated for only to a point. Beyond that point, the farmer has to take his licks. But the other side of that proposition is that in good times he must be permitted to earn a far better return than he has been seeing lately. We Americans are not paying nearly enough for our food. That is the long and short of it, and it simply isn't fair.

I forgot to tell you about Jimmy Falls's cow. She gave birth to twin calves. They're doing fine, even if the cattlemen aren't. □

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66th Annual Meeting

Replace the Dollar Bill With a Coin?

THE Treasury Department is studying the possibility of asking Congress to authorize the minting of a new \$1 coin. The coin's size would be somewhere between those of the 25-cent and 50-cent pieces, and it would be somewhat thicker than either.

Treasury is looking at the issue primarily from a cost basis. The life of a \$1 bill is 18 to 24 months. The cost of keeping the nation supplied with bills and of retiring those no longer fit for circulation is continually rising. A coin, on the other hand, typically remains in circulation for 16 to 20 years.

The idea of a \$1 coin is, of course, not new. The silver dollar was a mainstay of the American monetary system for generations. The hefty size of those coins was responsible for their being popularly known as cartwheels. But that unwieldy size, as well as other factors, sharply reduced demand for

silver dollars, and the government stopped minting them in 1935.

Production of a dollar coin was resumed in 1971, in tribute to the late President Dwight D. Eisenhower, whose likeness the coin bears. Because of its size, however, there has been little demand for the Eisenhower dollar.

Now a combination of rising prices and sharply increased use of coin-operated vending equipment has led government officials to predict that a popular-sized dollar coin will be needed soon as a replacement for the dollar bill.

On the other hand, there are those who say an enforced passing of the buck would be a surrender to inflation. Replacing the dollar bill with a coin, they say, would be the ultimate declaration that American money has been cheapened beyond recovery.

Those who do not favor moving to a

dollar coin also point out that, while the government might save production costs, businesses that make and use coin-counting devices would be saddled with additional expenses.

Critics also question the government's ability to judge public preferences in regard to money. They point out that demand for the \$2 bill, reissued a few years ago after a long hiatus, has been low.

The Treasury Department plans various surveys this year to obtain public opinion on a wide range of alternatives in supplying coin and currency. A new, smaller dollar coin will be among the possibilities raised. Results of the surveys may or may not lead to formal recommendations to Congress for changes.

Should the government begin minting a new, smaller, \$1 coin?

What do you think?

PLEASE CLIP THIS FORM FOR YOUR REPLY

Kenneth W. Medley, Editor
Nation's Business
1615 H Street N. W.
Washington, D. C. 20062

Should the government begin minting a new, smaller, \$1 coin? ☐ Yes ☐ No

Comments:

Name and title

(PLEASE PRINT)

Company

Street address

City

State

Zip

What to Do About HEW's Explosive Growth

THE Department of Health, Education, and Welfare has 159,000 employees and is spending \$160 billion in the current fiscal year. Its annual budget is the largest of any federal department's.

In 1953, when it was created by act of Congress, it had only 35,000 employees and spent only \$5 billion.

HEW's explosive expansion has led to a debate over whether a department of its size, with all its diverse aspects—it administers more than 350 programs—can be efficiently operated.

The "Sound Off to the Editor" question in the December issue of *NATION'S BUSINESS* asked: "Should the Department of Health, Education, and Welfare be broken up into separate departments?"

Results of the reader poll were close, with a slight edge favoring a breakup.

The department is "far too big to be efficient, effective, or economical," says J. B. Kidd, executive director of Trinity Hospital, Wolf Point, Mont.

Don Bowers, president of Bowers Companies, Inc., Long Beach, Calif., votes to have HEW broken up because "this vast operation cannot be managed effectively by one person."

Gene Calkins, president of Southwest Textbook Depository, Albuquerque, N. Mex., says: "The department wears so many hats and serves so many masters that it cannot do a proper job in any single area. Its diversity makes it too vulnerable to legislative and administrative manipulation."

And Blaine W. Cummings, owner of Cummings' Restaurant & Triangle Lanes, Colfax, Iowa, says: "I normally hate to see government agencies multiply, but in this instance, I feel the components were poor bedfellows in the first place."

On the other hand, some who favor keeping HEW as it is say that the total of the new departments would become bigger than the original.

Says E. J. Ruckman, owner of Tri-County Shopper, Bartlesville, Okla.: "If HEW were split into three different divisions, the governmental disease known as LGB (let's get bigger) would take over. The attending physicians,



Dave McCurrach, executive vice president, National School Supply & Equipment Assn., Arlington, Va., favors breaking up HEW because "it's too big, too political."



Charles Brinkley, chairman, Northeast National Bank, Ft. Worth, Texas, votes no. He says breaking up HEW "would enlarge an already unbearable problem."



Dan Norris, vice president, Brown & Caldwell, Eugene, Oregon, votes neither yes nor no. He says: "HEW does not need to be split, it needs to be disbanded."

both the Congress and its assistants, the bureaucrats, would be unable to curb the epidemic, and the cost would be enormous."

Guy Ullman, chairman of Enser Corp., Bethesda, Md., says: "Runaway government growth must be curbed. Consolidation, control, and conservation—not dispersion—offer the answer."

Dean B. Shoemaker, superintendent of Unified School District 274, Oakley, Kans., says: "I favor breaking up HEW into separate departments only on one condition—that the headquarters be located in Siberia, the Education Department in Uganda, and the Civil Rights Department at the North Pole. Otherwise, let's leave it as it is—large, unmanageable, inept, inconsistent, obnoxious, and comical."

Some vote for more drastic action than breaking up HEW. They favor eliminating it altogether.

"Get rid of it," says C. J. Shumaker, president of Shumaker Oil Co., Inc., Huntington, Ind.

"HEW has damaged the operation of more business and projects than can be enumerated," says Joan P. Oliver, manager of the Graham Chamber of Commerce, Graham, Texas. "The U. S. would be much better off if the department was completely done away with."

W. W. Hilliard, secretary-treasurer of Hill-Craft Mfg. Co., Lawndale, Calif., advocates breaking up HEW and "throwing away the pieces."

Among respondents who vote to make separate departments out of HEW, suggestions vary as to how the breakup can best be accomplished.

William S. Elkins, vice president of William Hamilton & Son, Inc., Caledonia, N. Y., suggests that education be separated from health and welfare. He says: "Education could be, and no doubt is, the tool used for snowballing the size and socialization of health and welfare work."

Donald F. Foy, executive director of the Indiana State Medical Association, Indianapolis, says: "A separate department of health would ensure appropriate consideration of health issues and strengthen management of the health

system. Adequate levels of funding would also be a by-product."

Robert H. Schlingman, president of American Plumbers Supply Co., Toledo, Ohio, says: "Health and education should be together because of a definite relationship, but welfare could be separated, especially if nationally controlled." He adds: "National guidelines with state control would be best."

And Richard W. Wilkinson, an executive recruiter for Cadillac Associates, Inc., Chicago, says: "I advocate separation of all three functions. Not only are these areas too unwieldy to be administered in one place, but conflicting vested interests exist which could wrongly influence decisions made in each area." Also, he says that "by cutting budgets, we could cut governmental growth."

Ross W. Dennis, editor of the "Lincoln Ledger," Star City, Ariz., believes that, in addition to breaking up HEW, "the entire responsibility should be handed back to each state. Washington would then have only to act as an appeals board for local and state governments."

Some respondents who favor a breakup also argue for curtailment of programs.

Peter L. Bloomer, owner of Horizons West, Flagstaff, Ariz., says: "HEW should be split apart and, within each segment, bad programs should be abolished. It is too massive as one department, and it is riddled with do-goodism programs which should have never been implemented."

Lt. Col. Harry H. Poarch, owner of the Economy Lumber Co., Tulsa, favors keeping HEW as one department, but he, too, calls for curtailments. "Too much is done by HEW now that shouldn't be done at all," he says. "There needs to be a rejuvenation of people doing for themselves."

Among those who vote no to an HEW breakup are proponents of a number of alternatives.

"It's harder to control three monsters than it is one monster," says John T. Coker, president of A to Z Rentals, Frederick, Md. "Cut HEW's budget, and it will shrink to a manageable size."

Says F. M. Rogers, personnel director at Eggers Plywood Co., Two Rivers, Wis.: "If HEW has more responsibilities than it can effectively handle, let's find someone in the private sector to handle the overflow. It will be done much better."

Catherine H. Raycroft, executive director of the Human Services Planning Council of Schenectady County, Inc., Schenectady, N. Y., urges: "Break up the autonomy of the departments within HEW and develop comprehensive client-oriented services under a single set of guidelines."

And Gerard B. Tannehill, owner of Tall Timbers, Somerset, Pa., says: "Two people are all it would take to give away that \$160 billion a year—one to put checks in envelopes and one to mail the envelopes. That would cut the size of HEW."

Vincent Mazzone, owner of Mazzone's Hardware, Brooklyn, N. Y., sees little hope. "It would be strictly unrealistic to break up HEW for the purpose of reducing waste," he says. "In government, there is no such thing as reducing waste."

However, Leonard Clark, owner of Mr. C's Seafood and Convenience Market, Rutland, Vt., sees a solution to the problem of reducing HEW's payroll. Break up the department, he urges—really break it up. He explains: "Turn it into 159,000 separate departments and demand that each department head eliminate one nonessential job from each department." □



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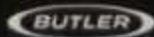
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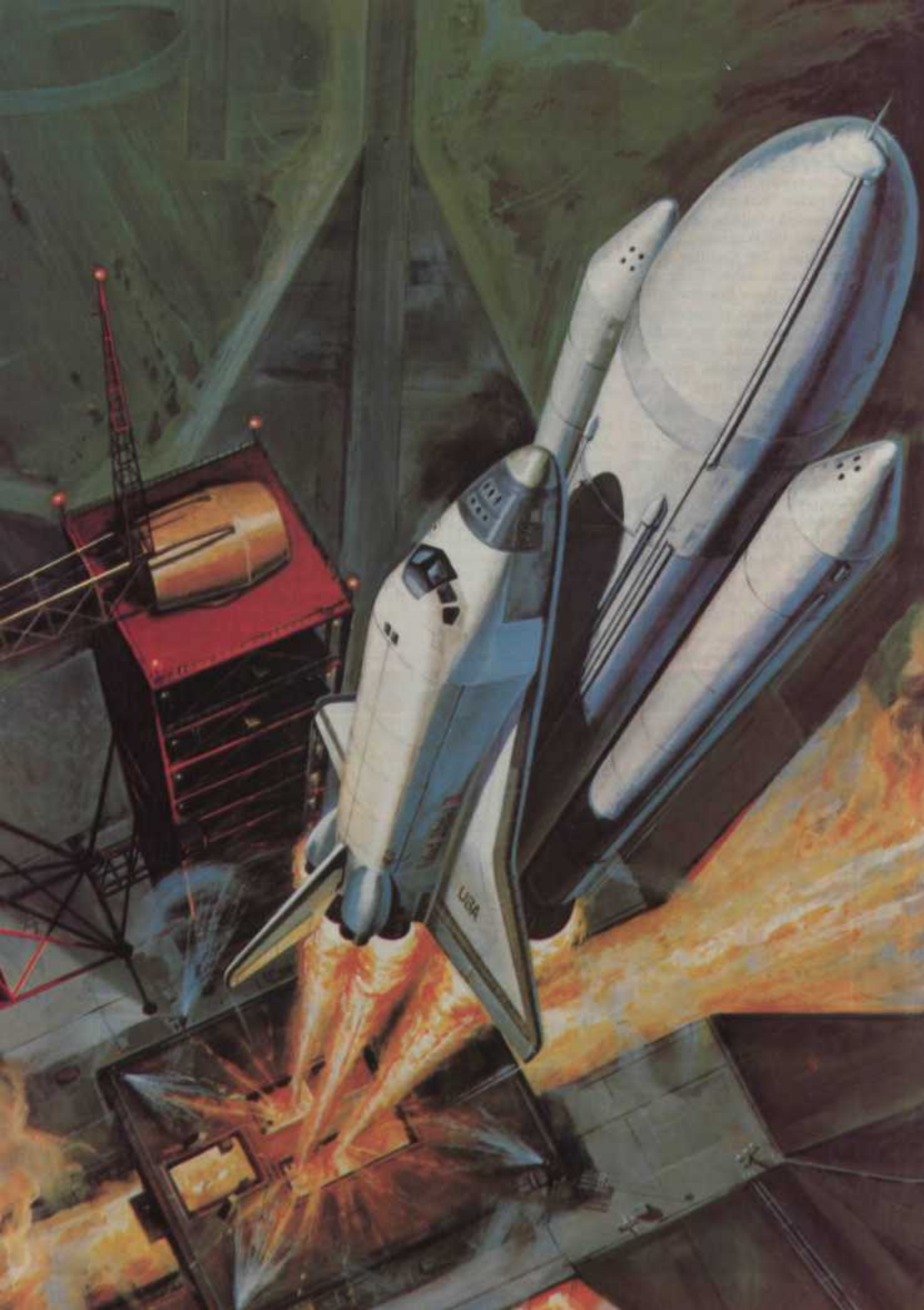
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SPACE: INDUSTRY'S NEW FRONTIER

By Vernon Louviere

A new industrial revolution is about to begin with the advent of the space shuttle. This chunky craft is expected to open the way for manufacturing, power plants, tourism, and even colonies in the heavens

Too low they build, who build beneath the stars.

—"Night Thoughts," Edward Young (1683-1765)

TWENTY years ago, the United States, stunned by the news of the Russian Sputnik, launched itself into the infant Space Age by rocketing a 30-pound satellite into low earth orbit.

Less than a dozen years later, the United States had overtaken and passed the Soviet Union, and the world witnessed one of the most dazzling exploits in history: Astronaut Neil Armstrong stepped out on the moon and proclaimed, "One small step for man, one giant leap for mankind."

In the years since that first landing on the moon, the United States has probed deeper and deeper into the mysterious reaches of outer space, with ingenious devices exposing the hidden secrets of Jupiter, Mars, Mercury, Venus, and beyond.

The lunar landing provided the high drama of America's first two decades in space. Less dramatic is the immense wealth of scientific knowledge that has been and continues to be accumulated as we hurl rocket after rocket toward the deep recesses of the universe.

The cost of leading the way

For the United States to dominate the race into space has meant huge outlays of money that some detractors claim would be far wiser spent solving earthly problems. By and large, however, most Americans accept the fact that this heavy spending on space exploration pays off in terms of contributing to

knowledge and helping the U. S. maintain military superiority, not to mention bolstering national pride.

Now America embarks on a new era—one of true space travel. Between this year and the end of the 20th century, U. S. scientists will seek to open highways to the heavens so they can convert new space knowledge into beneficial uses on earth.

This will be the age of the space shuttle. For the first time, the United States will have a reusable spacecraft, one that will loft men (and women, too) into orbit and let them return to earth in airplane style landings.

The space shuttle—part airplane, part spacecraft—will pave the way for the beginning of space industrialization, a new industrial revolution bringing American business into solid partnership with space science. This marriage of technology and the marketplace is expected to improve old products and create new ones, vastly heighten the ability of people to communicate with one another, help uncover sources of oil, gas, and other valuable minerals, expand the sci-

ence of weather forecasting, and set the stage for large-scale exploitation of solar energy.

Huge revenues for business

By the end of this century, some experts say, business in space will have generated revenues which could reach the neighborhood of a staggering \$30 billion. Private enterprise, they predict, will take over more and more of an area now dominated by government, as the business community capitalizes on opportunities springing from industrialization.

In a sense, with the start of this new phase of space exploration, the United States stands at a crossroads similar to that of the 19th century when the railroads pushed across the western frontier, opening new industrial vistas and creating new wealth for this country and its people.

A small but growing number of American businesses already accept the space challenge, realizing that they are in the vanguard of business people entering an exciting era.

"As pioneering successes take place, you can expect much more of American industry to join the equivalent of a land rush into space," Paul Siegler, president of Earth/Space, Inc., a California space consulting firm, told *NATION'S BUSINESS*.

The centerpiece of this unfolding second phase of space voyaging—the Model T, so to speak, of the expanding thrust skyward—is an ungainly looking flying machine with stubby body, stunted wings, and grotesque tail. This is the American space shuttle, whose prototype—the Enterprise—is now undergo-

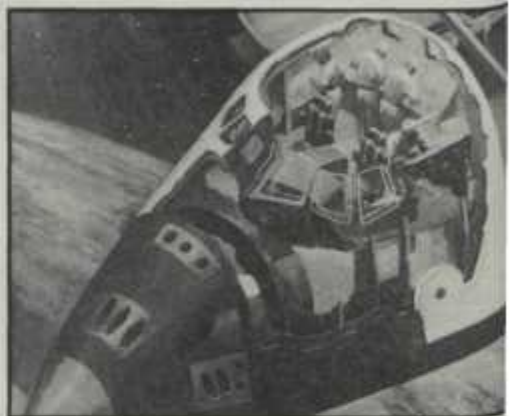




The shuttle Enterprise rides piggyback on a Boeing 747 which is taking it aloft from a California runway for a free-flight test that will last only a few minutes.



Flight Commander Fred W. Haise (left) and Pilot C. Gordon Fullerton at the controls of the Enterprise.



Shuttle astronauts at work in the pressurized crew section.

ing a series of test flights and landings.

Prime contractor for the shuttle—five are planned—is Rockwell International, the industrial giant that designed and built the lion's share of the Apollo lunar project, which culminated in six successful landings on the moon.

Sharing in the shuttle contract are such well-known aerospace firms as Martin Marietta, General Dynamics, Grumman Aerospace, Fairchild Republic, and Thiokol.

Metamorphosis in the spring

Sometime in the spring of 1979, at Cape Canaveral, the squat, chunky shuttle will undergo a metamorphosis. Like its wingless forebears it will assume a vertical position on the launch pad. Two powerful solid-fuel rocket boosters and a huge propellant tank, all three resembling giant torpedoes, will be joined to the shuttle. Two astronauts will climb aboard, the two booster rockets and three liquid rocket engines on the craft itself will burst to life, and the world's first true space flying machine—now for the first time looking the part—will streak into the skies.

After two minutes of flight, the two boosters will burn out and drop off in the Atlantic to be picked up later and reused in future flights. A few minutes more, and

the big external tank will be jettisoned over a remote part of the ocean. It will burn and break up into small pieces as it tumbles earthward. The external tank is the only expendable part of the operation.

Now the shuttle will be on its own, able to maneuver as its pilot wishes in the vast ranges of low earth orbit, a belt of space extending from 100 to 600 miles above the planet. On completion of this first manned test, scheduled to run from 54 hours to five days, the astronaut pilot will dip the craft's nose down and point it toward the desert runways at Edwards Air Force Base in California. By the fifth shuttle flight, landings will be at Cape Canaveral on the longest man-made runway in the world, a 15,000-foot stretch of concrete built especially for the shuttle.

A series of such flights are planned during 1979 and early 1980, according to the National Aeronautics and Space Administration. The turnaround time between flights can be as short as two weeks because of the shuttle's adaptability to quick overhaul and maintenance.

Starting in 1980, and for the next ten years, the space shuttle system will be fully operational, conducting a wide range of experiments—for industry; for

government, including the military; and for foreign interests. Each of the five shuttles will be built to make 100 round trips, so, over the length of the program, as many as 500 missions may be accomplished.

A primary feature of the shuttle is that it can take a 65,000-pound payload into space and return to earth. The shuttle can accommodate seven people—three astronauts and four mission specialists who will handle experiments or engage in small-scale manufacturing—and they will live and work in a shirt-sleeve environment. Missions will run from seven to 30 days.

Pay as you go

For the first time, NASA has come up with a pay-as-you-go space vehicle. Over the ten years of the shuttle program, and the 500 or so flights planned, the average cost of a mission will come to about \$21 million, according to NASA computations. Whoever books space on the shuttle—a private business, a federal agency, or a foreign government—will pay the \$21 million. If there are two users, they will split the cost.

There will be some exceptions to the amount charged. The European Space Agency, a consortium of ten Western European nations engaged in space re-

HOW BENEFITS OF SPACE RESEARCH SPREAD THROUGHOUT THE ECONOMY

When researchers developed a compound to keep spacecraft windows clear before launch, they probably had little idea that they were paving the way for fogless-ski goggles.

It also wasn't known that the search for space materials that withstand high temperatures would someday produce better brake linings on the family automobile.

Or that the principles applied to automatic checkout equipment used on Apollo lunar flights would later make it possible to reduce the likelihood of power blackouts.

These and thousands of other applications are spin-offs of the multibillion-dollar investment in the American space program. They are being used in innumerable ways that affect almost every aspect of our daily living.

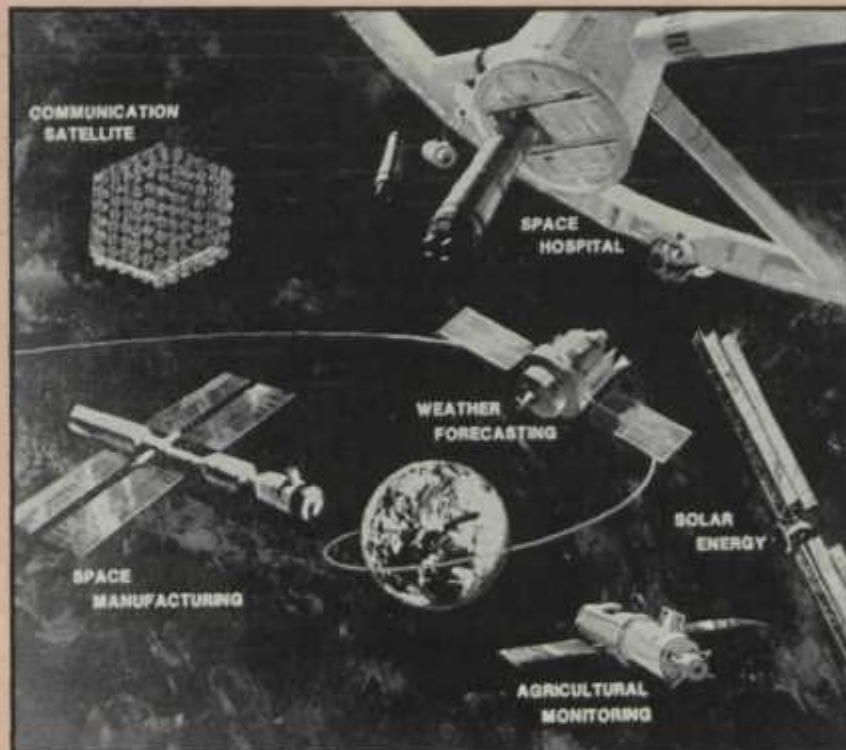
While there are no precise figures, products and services spun off from space research and development have added and will continue to add billions of dollars to the economy.

Each new weather satellite launched into outer space brings us closer to accurate five-day weather forecasting. When that point is reached, it will bring estimated savings of \$5.5 billion a year in agriculture, construction, transportation, recreation, and other industries.

The computer business is probably the greatest nonaerospace spin-off of space technology. U.S. exports of computers increased 1,400 percent in the first decade of the Space Age, and computer sales now are growing at the rate of 40 percent a year.

Before many more years, practically every major city will be using fully computerized automobile traffic control systems which will automatically regulate the flow of traffic. This is an outgrowth of a system devised to analyze trajectories and landing locations on the moon.

A zinc-rich coating that protects metal against salt spray was developed by space researchers. Use of the coating on bridges over salt wa-



ter, offshore drilling rigs, ships, and utility pipelines is expected to create a \$2 billion-a-year industry.

Electrical wiring in tomorrow's homes and offices will be a simpler matter. A flat wire developed by the National Aeronautics and Space Administration for use on spacecraft can now be installed behind baseboards and under carpets.

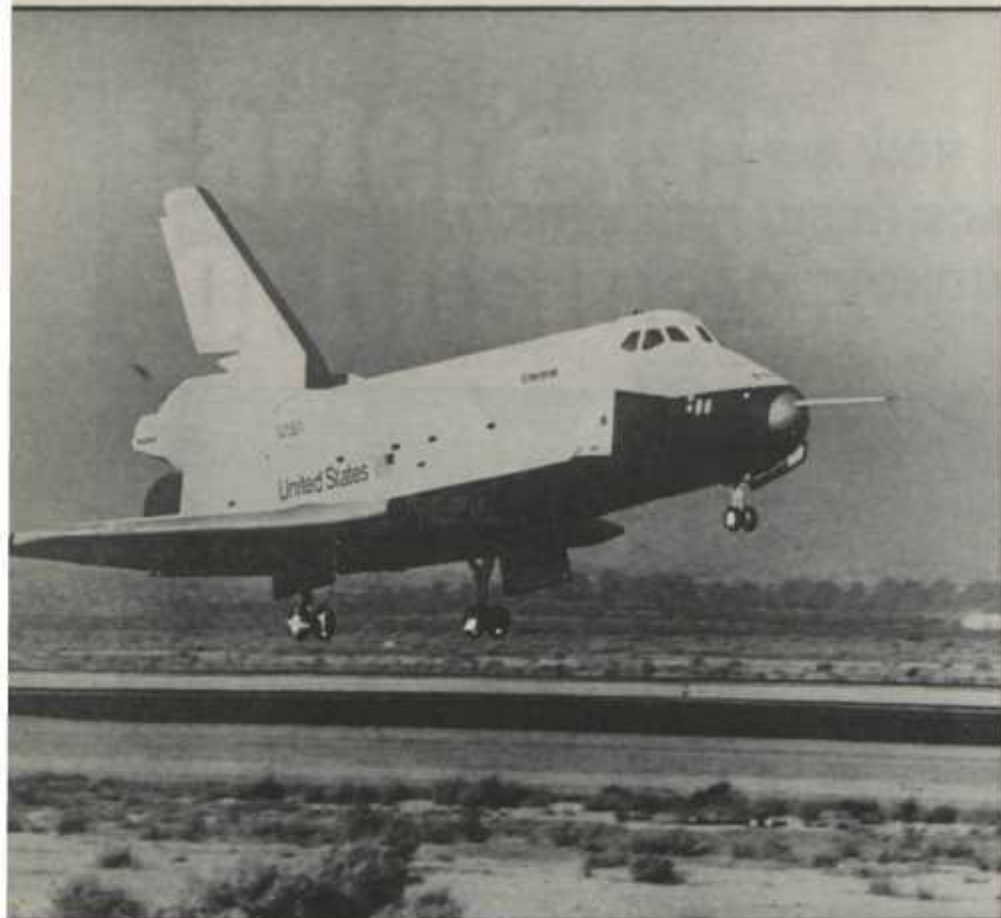
Numerous enterprises have been created as a result of space research. For example, American Satellite Corp., a subsidiary of Fairchild Industries, Inc., provides business with a communication system linked to orbiting satellites that enables users to connect distant facilities instantly by telephone, computer, facsimile, and television. The user can talk person-to-person or computer-to-computer and can send data and other information simultaneously through the system.

Southland Corp., operator and franchiser of 7-Eleven stores, one of American Satellite's first customers,

sends daily business transactions between its computers in New York and Dallas. Boeing Computer Services, Inc., is linking its operations in Seattle, Wichita, and Philadelphia with the system.

Automation Industries, Inc., a Connecticut company, was called on by NASA to develop equipment to inspect welds in aluminum alloys used in construction of spacecraft. The company later adapted the ultrasonic equipment to a rail inspection device that saves countless man-hours. Attached to self-propelled railroad cars, the device is now in use on railroads here and in several foreign countries.

Also, the old-fashioned ax, butt of many fireman jokes, may be on the way out. Explosive Technology, Inc., is marketing the Jetaxe, a small container of explosive that helps firemen get into burning buildings and chop holes for ventilation. The firm developed the explosive as a means of separating stages of the Gemini launch vehicle.



Seconds from touchdown at Edwards Air Force Base in California, the shuttle is undergoing a series of tests. It will be taking off into space in 1979.



George W. Jeffs, president of North American space operations for Rockwell.



Test flight four of the Enterprise is a success.

search, is putting in \$600 million to build the Spacelab that will be flown aboard the shuttle in the 1980's. So the agency will be billed on the basis of \$18 million a flight.

The same goes for the Canadian government, which is contributing a \$90 million manipulator arm that will be used for launching other spacecraft from the shuttle, for repairing communications satellites, and the like. NASA also will enjoy the lower rate, as will certain other federal agencies for special missions.

All the action won't be enjoyed by corporate giants and well-heeled governments. NASA has come up with a way for others to participate, to share in the thrill of this pioneering mode of transportation.

You can make a reservation

For as little as \$3,000—\$500 down—you can reserve space for a legitimate experiment aboard a shuttle flight. A number of small companies, universities, and even individuals have nailed down their reservations for what NASA calls its "Getaway Special" program.

After the lunar landings, it became apparent that the American space program was in danger of grinding to a halt. The drama and the glamour were gone. Mounting economic problems and rising

budget deficits would make it more and more difficult for Congress or the White House to generously approve requests for continued spending in space. In 1970, NASA began concentrating on the concept of reusable space vehicles where tangible, easily visible benefits would be immediate and costs would be held down significantly. Thus the space shuttle was born.

In terms of costs, the shuttle doesn't approach the Apollo project, which represented an outlay of about \$21 billion from drawing board to the first lunar landing. The price tag for the whole shuttle program is expected to be in the neighborhood of \$7 billion to \$8 billion.

In terms of payload, the shuttle is a real bargain for the taxpayer. It cost \$500,000 a pound to put a 20- to 30-pound payload aboard the Vanguard missile in the late 1950's. When the Thor missile came along in the 1960's, with payloads of little more than half a ton, the cost was reduced to \$10,000 a pound. Payloads on the Saturn moon rockets came in at \$600 a pound. With the shuttle, the cost drops to \$150 a pound.

And when the next generation of space freighters comes along, with possibly as many as ten departures daily at Cape Canaveral's Kennedy Space Cen-

ter, the price could drop to \$20 or even \$10 a pound.

NASA is counting on business to help keep the momentum going on space activity. Once space industrialization takes hold, NASA officials believe, space colonization will only be a matter of time. Those who favor space colonization point to the delicate ecological balance of the earth, its finite resources, and its burgeoning human population.

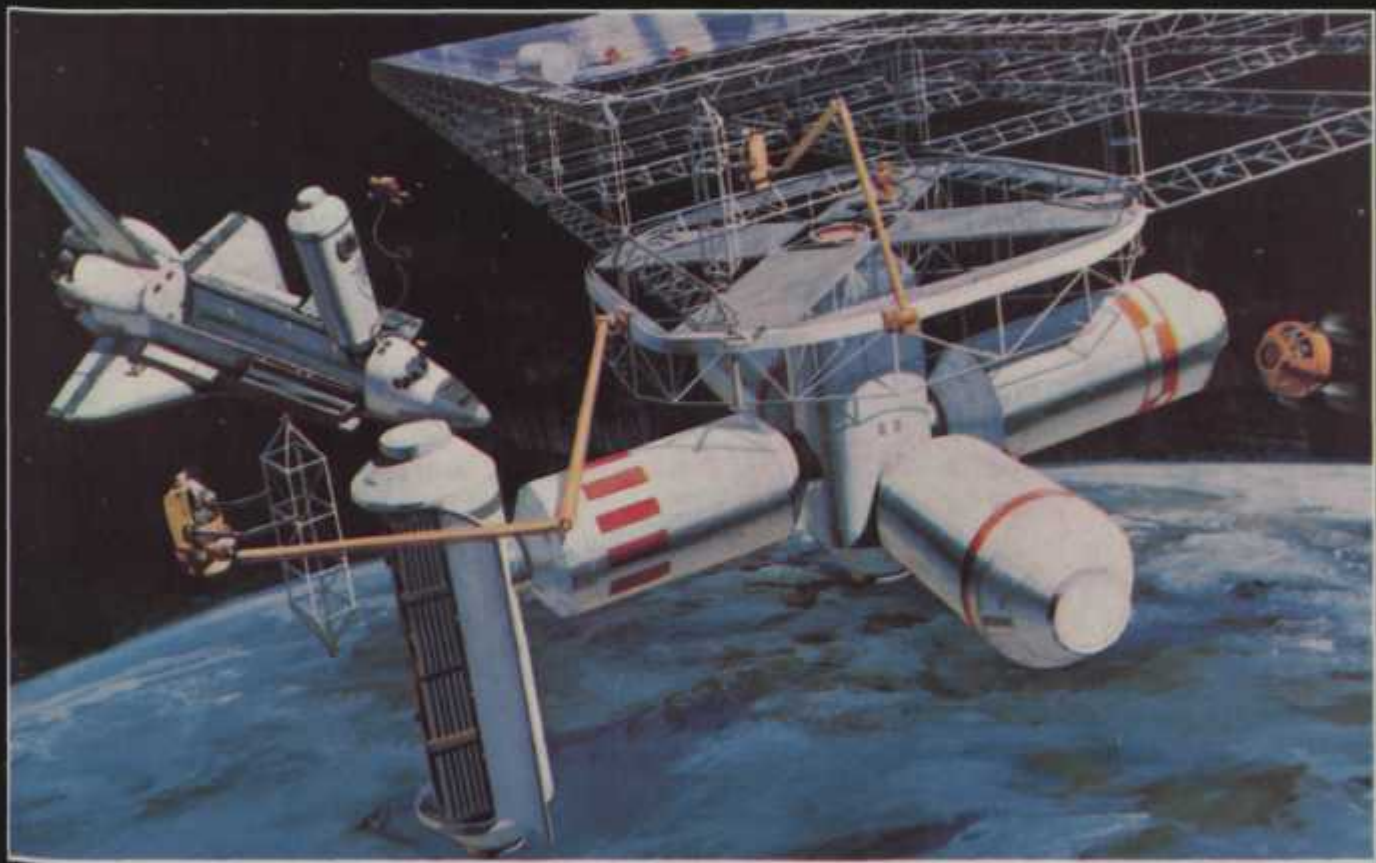
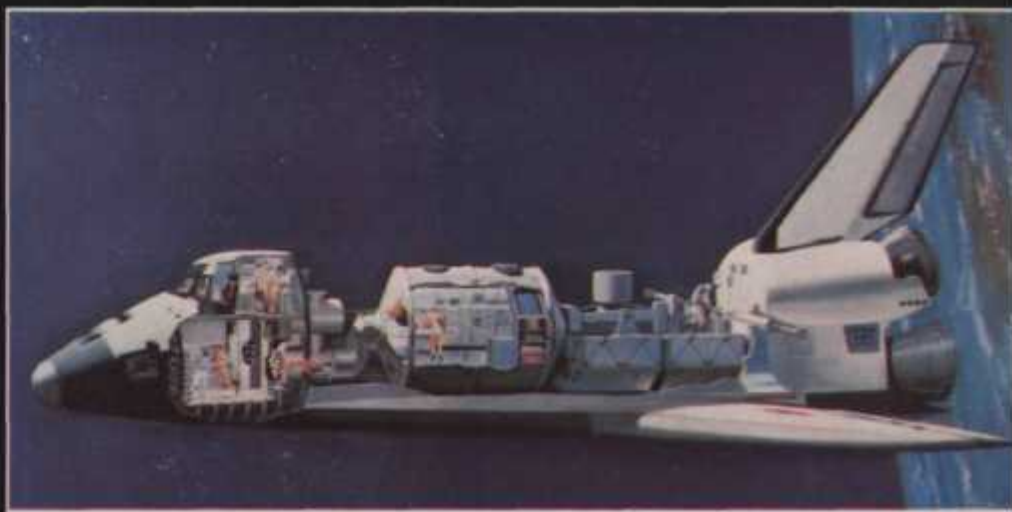
Almost wearless machinery

No man speaks more convincingly on space industrialization than George W. Jeffs, president of North American space operations for Rockwell. Industrialization, he says, "can utilize the unique properties of space—weightlessness, hard vacuum, limitless energy, and high vantage point—to produce large-scale benefits for all people."

Factories in space would feature almost wearless machinery. Without the physical constraints of gravity, workers and equipment would move about much more easily.

Individual productivity would increase because of lower energy expenditure. There would be few negative side effects such as pollution, congestion, and safety hazards. A big plus would be limitless nonpolluting energy from the sun.

In the center of the shuttle is the \$600 million Spacelab, built by European interests. Four specialists will work in a shirt-sleeve environment on a variety of experiments in all of the planned flights.



The shuttle delivers a module for assembly as a space station in this artist's rendering. On such stations will be built tomorrow's solar power plants, factories, and perhaps even cities.



This is an artist's concept of what touchdown will look like for the shuttle. The world's longest runway has been built at Cape Canaveral in Florida to handle most of the 500 planned flights.



In the years to come Bill and Linda may fly in a real Space Shuttleand Armco materials will go along.

As Bill and Linda examine this scale model, the NASA/Rockwell Space Shuttle Orbiter *Enterprise* is completing early flights. In a matter of months, a second Orbiter will make its initial voyage to space and back. Then it will go to work, expected to log 100 or more round trips in its career.

These first Shuttle crafts will be followed by others. Well before the century ends, thousands of men and women will have shared these vehicles' tasks in the sky. Armco materials will go with them as parts of the Shuttles themselves, and in equipment and instruments they will transport.

As space age workhorses, Shuttle Orbiters will launch and service satellites for communications, weather mapping, navigation, pollution monitoring, locating earth resources, and warning of disasters or crop disease. They will haul what's needed—including people—to construct space-based laboratories, power stations or solar energy collecting systems.

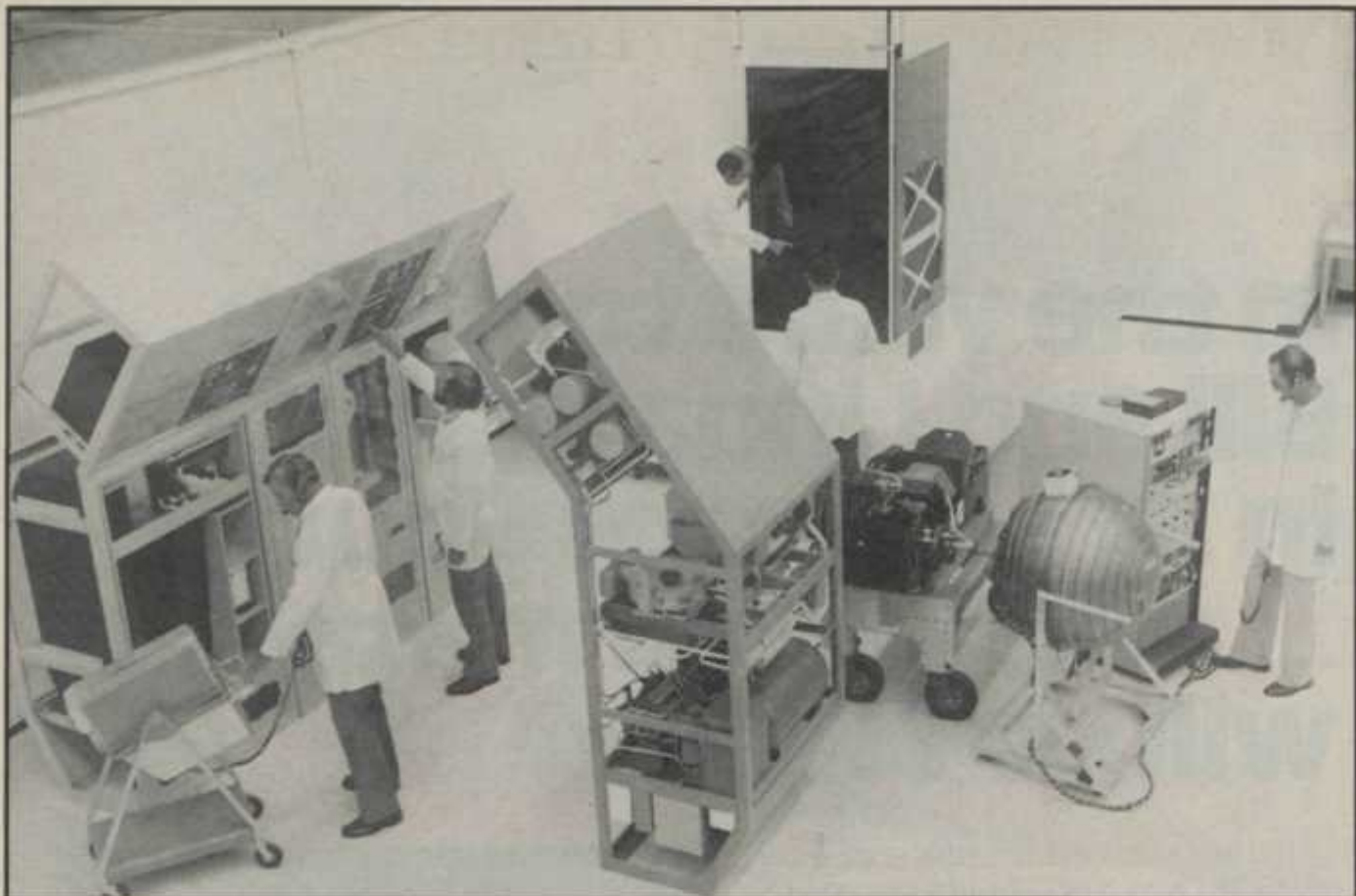
In short, the Shuttle will make space flight pay off. We're proud that in a small way, with hundreds of U.S. companies, Armco will have a part in this American undertaking.



American Enterprise. When the Shuttle Orbiter *Enterprise* made its first free flight August 12, space age steels from Armco served in vital components. Advanced materials like these are the result of reinvested profits—earnings used to expand the research facilities that spawn them.

For more information about special Armco steels for the Space Age, write Armco Steel Corporation, Dept. 97, General Offices, Middletown, Ohio 45043.





General Electric space division engineers move through a full-scale exercise to see how people and hardware will come together in the Spacelab when the shuttle is on an actual operational mission.

energy readily available outside the earth's atmosphere.

Mr. Jeffs's view is echoed by Dr. Robert A. Frosch, administrator of NASA, who told a congressional committee:

"While the shuttle is frequently discussed in terms of its ability to accomplish the things that we are already able to do in space, but in a more economical way, I believe its real significance lies in its ability to enable us to do new things in space that we cannot now do because of restrictions imposed by expendable launch vehicles.

"These new capabilities will begin to give us entirely new ideas for long-range projects."

Dr. Klaus Heiss, president of Econ, Inc., a Princeton, N. J., firm which has evaluated a number of NASA projects from the standpoint of costs, is unequivocal in predicting that the role of business in space will expand in the remaining years of this century. Looking further down the road, to the period starting about the year 2000, he says:

"Industrial space activities, with or without financial participation by government, will develop and sustain themselves entirely, based on pursuit of economic interests. Once this point is reached, the space program will have become truly irreversible. Economic self-

interest, again and again, has proven to be the most lasting historical motivation for human activity."

High-priced tourism

Earth/Space, Inc., the California consulting firm, has a contract with NASA to study the implications of space industrialization over the next 30 years. Paul Siegler, the president, predicts that transmission of information, solar power, and a fledgling tourist industry—all developed by the shuttle—will generate between \$6 billion and \$19 billion in revenues in the next two decades.

In addition, materials processing in space—metals, glass, medicines—will bring pioneering entrepreneurs \$2 billion to \$10 billion, he says.

"We're talking about things like wrist radios where people can communicate coast-to-coast for a few pennies, electronic mail, sophisticated national information services, and teleconferences where businessmen in several cities can get together as though they were around the same conference table," Mr. Siegler told NATION'S BUSINESS.

He sees the first trickle of tourists coming on the scene near the end of the century.

"We're looking at people who would pay \$50,000 for a few days in space,"

Mr. Siegler says. "In time, that could be cut to \$5,000. I see a 100-room hotel up there in about the year 2000, when the tourist traffic really starts to move."

Mr. Siegler believes 1985 will be the turning point for American business to take the big plunge in space. At that time, he says, the two major stumbling blocks to business participation—companies' doubts that they can afford the investment and that they can turn out a marketable product or service—should fall by the wayside.

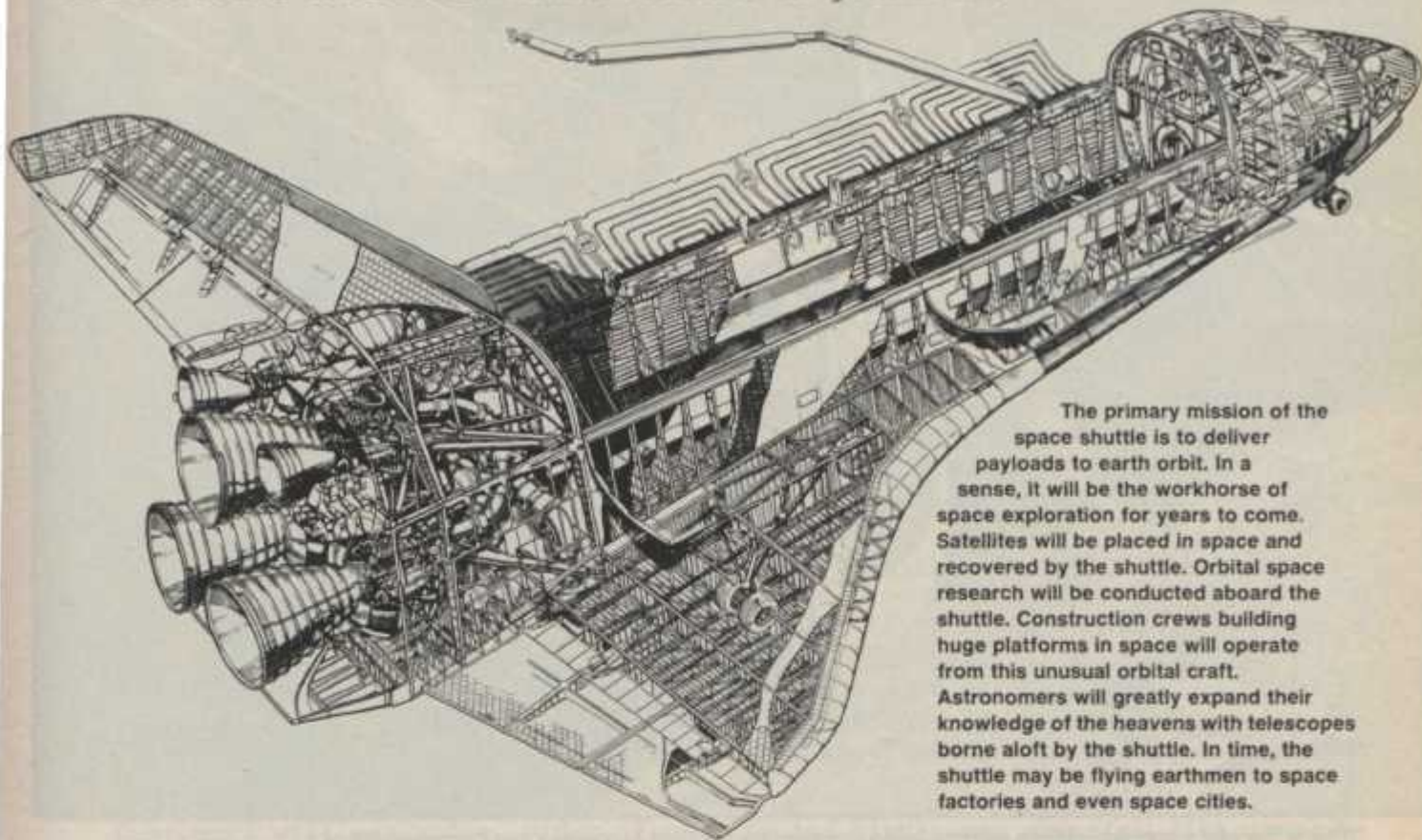
"As we proceed, government more and more will have to learn to speak the language of the marketplace, or we will have to get into the private space launching business," Mr. Siegler says. "Eventually, private enterprise will compete with NASA, and there will be increasing competition from abroad."

Boost to communications

Business investment in space actually has been under way for some time, considering the multiple uses being made of communications satellites—ranging from improved telephone service to remote telecasting from practically anywhere on earth.

Now it will be possible to launch from the high-flying shuttle even more complex satellites into even higher orbit and

THE SPACE SHUTTLE AND WHAT IT WILL DO



The primary mission of the space shuttle is to deliver payloads to earth orbit. In a sense, it will be the workhorse of space exploration for years to come. Satellites will be placed in space and recovered by the shuttle. Orbital space research will be conducted aboard the shuttle. Construction crews building huge platforms in space will operate from this unusual orbital craft. Astronomers will greatly expand their knowledge of the heavens with telescopes borne aloft by the shuttle. In time, the shuttle may be flying earthmen to space factories and even space cities.

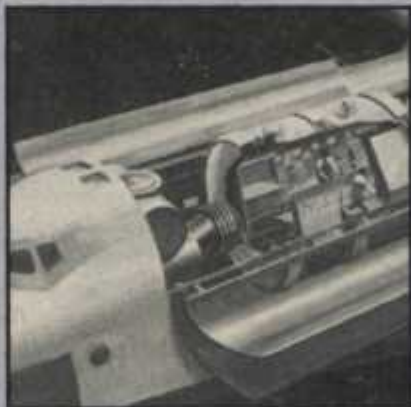
SPACELAB: SOLVER OF INDUSTRIAL PROBLEMS

The Spacelab, a pressurized, shirt-sleeve laboratory, will give an international flavor to the shuttle, which will carry it for the first time in 1980.

It is being built at a cost of some \$600 million by the ten Western European nations which make up the European Space Agency. One of the four payload specialists who will conduct experiments in the Spacelab's first mission will be a European.

The payload specialists will work in the lab, carried in the cargo bay of the shuttle, and spend the rest of their time in the crew cabin with the shuttle's three astronauts. One of the first lab specialists will likely be a woman.

More than a thousand scientists from the U. S. and abroad have volunteered for service on the Spacelab. Requirements for being a payload



specialist are not nearly as rigid as those for astronauts.

The Spacelab will be equipped to conduct a variety of experiments in astronomy, life sciences, biomedicine, and industrial technology. Missions will run from seven to 30 days.

Business investors will follow the work of the Spacelab with keen interest, since half of the lab's activity will be geared to industry-related experiments. Many industrial problems which cannot be solved on earth may be solved in the Spacelab. A major goal is to develop new industrial products and improve existing ones.



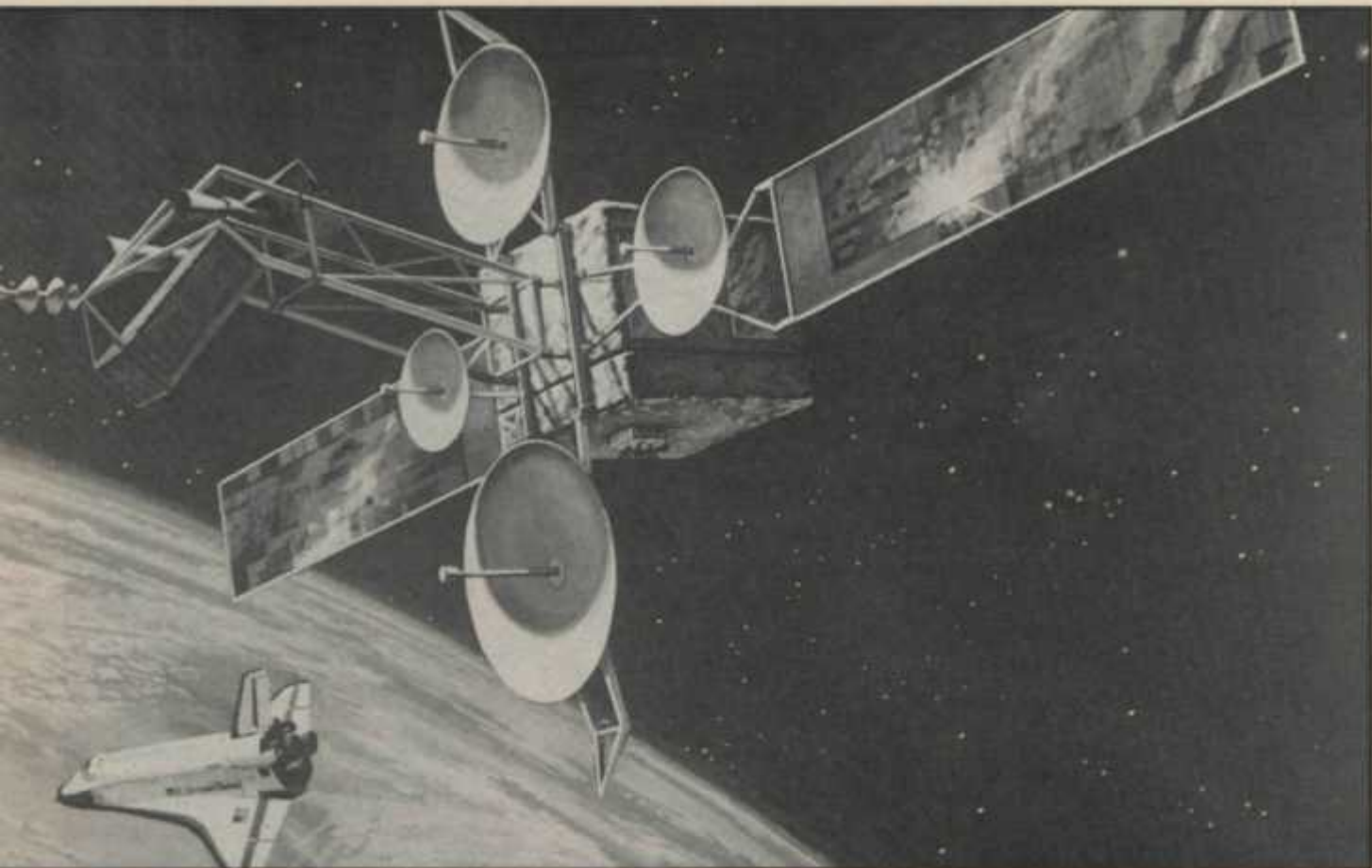
Recovering a satellite.



Servicing and repairs.



Mixed payloads.



This is the way a communications satellite being designed by the Ford Aerospace and Communications Corp. may look. It is designed to fold into the shuttle and then be launched into low earth orbit.

to repair, service, and retrieve satellites already on station. This alone will add years to the life of such satellites, which are now lost forever if they develop malfunctions.

"Just to meet long-distance telephone requirements in the year 2000, we are going to need at least 50 more satellites," says retired Navy Capt. Chester M. Lee, NASA's space transport system director. "This means an increase in an already active field. The number of shuttle flights to repair and maintain these satellites will have to be stepped up. As with the airline industry, when you increase the number of flights, you reduce the costs of operation."

He adds: "When we look for customers for the shuttle, we will look at the business community."

Seeing the unseeable

Several major communications firms already have booked space on early shuttle flights to launch a new generation of communications satellites. The firms include Western Union, Satellite Business Systems (a joint venture of IBM, Aetna Life & Casualty, and Comsat General) and the Communications Satellite Corp. Each has put up a nonrefundable \$100,000 down payment.

Geologists hope the shuttle will add a

new dimension to the ceaseless search for oil, gas, and other minerals. More than 100 major oil, gas, mineral, and engineering companies (Exxon, Bethlehem Steel, Kerr-McGee, Union Oil, U. S. Gypsum, and Phelps Dodge, to name a few) formed the Geosat Committee in 1976 to encourage NASA to incorporate special sensors in satellite designs. The sensors would help detect natural resources on earth from the vantage point of space.

The Geosat Committee's president, Dr. Frederick B. Henderson III, told NATION'S BUSINESS the shuttle will make it possible to modify sensing devices on satellites while they continue to circle the globe. Today such equipment must operate in the same way from the time it is programmed before launch until the satellite burns out.

"We would like to have geologists aboard some of these shuttle flights because of the contributions they can make," Dr. Henderson says.

"Already, with satellites alone, we are seeing structural geological features we could not see before. In this business you're always looking for something that's buried. You're looking for clues."

Among other things, he explains, cameras could be launched from the orbiting shuttle that are more sophisticated than

space cameras now launched from earth, enhancing the ability of geologists to uncover mineral riches in the ground and under the seas.

Saving of millions

Dr. Henderson says studies show that improved reconnaissance from the vantage point of outer space could shave \$250 million off the \$2.5 billion now annually spent looking for new mineral sources.

Obviously, there is no way of knowing what the shuttle, working with improved satellites, will turn up. But, Dr. Henderson says, "if only one copper deposit or one 100-million-barrel oil field is found, the cost of one of these space systems would be more than paid for."

One thing is sure, he adds: If these geological space tools had been around in 1901, spotting the immense riches of Texas's Spindletop, the greatest oil find in history, would have been a snap.

The minerals industries currently acquire their on-high geological data—though this is an infant science at best—from the two Landsat satellites that have been orbiting the earth for several years. But these satellites have been geared principally to study agriculture, water resources, and land planning. The Geosat Committee is pushing to have more geo-

SCIENCE/SCOPE

For the first time in the history of space technology, a single electronics system will perform both radar and communications functions aboard NASA's Space Shuttle Orbiter. Meshing the "eyes, ears and voice" functions into a 260-pound hardware package, results in a significant reduction in weight and space. Major components such as the transmitter, receiver, antenna and servo mechanisms perform dual roles.

As a radar, the unit searches for, acquires, tracks and delivers spatial data needed for Orbiter to effect a quick, efficient rendezvous with other space vehicles. As a communications system, it provides high-quality transmission and reception with ground stations via two relay satellites. The Ku-band subsystem will be built by Hughes for prime Space Shuttle contractor Rockwell International.

Satellite Business Systems will operate the first all-digital commercial satellite system, for the first time offering customers private communications networks via satellite and small rooftop antenna terminals. The SBS system also will be the first commercial system to function entirely in the higher (14/12 gigahertz) frequency bands, permitting SBS to site its Earth stations on customer premises without interference with existing microwave facilities. Designed by Hughes, SBS spacecraft feature a unique telescoping solar panel "sleeve" that doubles the power available over earlier satellites of this type.

Customers will get voice, video, facsimile and high-speed computer data communications services on a time-division multiple-access basis. This TDMA technique allows several users to share the same frequency with their individual messages (digital pulses) separated by time. Frequency-sharing and all-digital transmission will provide high-speed, low-cost communications service. Hughes is constructing the spacecraft for launch in late 1980 under contract to SBS, a partnership formed by Aetna Casualty & Surety Co., Comsat General Corp., and IBM.

A new kind of instrument will help meteorologists gauge more accurately the direction and speed of winds at all altitudes -- and thus improve long-range weather forecasting -- when the first of three Hughes-built weather satellites is launched from the Space Shuttle in the early 1980's. Intended for use along with similar spacecraft from Europe, Japan and the Soviet Union, the Geostationary Operational Environmental Satellites (GOES-D, E and F) are U.S. entries in an international weather-watch program. NASA manages the construction and launch of GOES for the National Oceanic and Atmospheric Administration, which generates the satellite system.

Heart of the new satellites will be a Visible Infrared Spin-Scan Radiometer Atmospheric Sounder (VAS), built by Hughes' Santa Barbara Research Center, that will produce day and night pictures of the Earth's cloud cover, as well as determining the three-dimensional structure of atmospheric temperature and humidity. The satellite's instrumentation payload also will contain a Space Environment Monitoring System designed to check solar emissions.

Creating a new world with electronics

HUGHES

HUGHES AIRCRAFT COMPANY

NASA'S HUGE TREASURE CHESTS OF INFORMATION

An American thermometer manufacturer found an inexpensive way of printing degree lines on his thermometers, and now his product is competitive with thermometers produced in Japan, Korea, and Taiwan. In the first year, his sales shot up \$200,000.

When the Alaskan pipeline was being built, engineers installed heat pipes, developed for spacecraft, to protect the line against the fierce Arctic cold. This saved hundreds of millions of dollars.

Both money-saving ideas—and thousands more like them—came from the industrial applications centers operated by the National Aeronautics and Space Administration.

The network of seven centers around the country is considered the world's most extensive repository of scientific, technological, and engineering information.

Computers at the centers contain information on all the research accomplished during 20 years of space activity (the bulk of the \$43 billion spent by NASA has been for research and development) and an additional \$200 billion of research performed by private and other public organizations.

This vast wealth of information is available to U.S. industry at modest cost.

More than 4,000 companies, many of them small, are taking advantage of this technological bonanza. For a few dollars, for example, a manufacturer can solve a knotty production problem.

Fees charged depend solely on the time spent to identify and retrieve the information being sought. Teams of scientists and engineers, drawn from universities at or near the centers' locations and experienced in working for profit-making companies, staff the centers. All information solicited and given is held in confidence.

These centers are not typical government operations, and bureaucratic red tape is almost nonexistent. They are supported in part by NASA, but



A spin-off of space research is this General Electric unit which permits a complete physical in seven minutes.



most of their operating income is derived from fees.

Each center has computerized access to about 750,000 space-related reports as well as to ten times that many reports produced by private-sector and nonspace governmental sources. In addition, the centers have specialized files dealing with food technology, metallurgy, textile technology, medicine, economics, and many other social and physical sciences. The contents of more than 15,000 scientific and technical journals from all over the world also are available.

A question often asked—"Can research done by others really solve my problems?"—usually is answered affirmatively.

The centers:

Aerospace Research Applications Center, 1201 E. 38th Street, Indianapolis, Ind. 46205. Phone: (317) 264-4644.



A device for detecting malfunctions in a spacecraft is playing a similar role for the family automobile.

Automated fire weather stations developed by NASA are now being used in California to help predict where forest fires might occur.

Knowledge Availability Systems Center, University of Pittsburgh, Pittsburgh, Pa. 15260. Phone: (412) 624-5211.

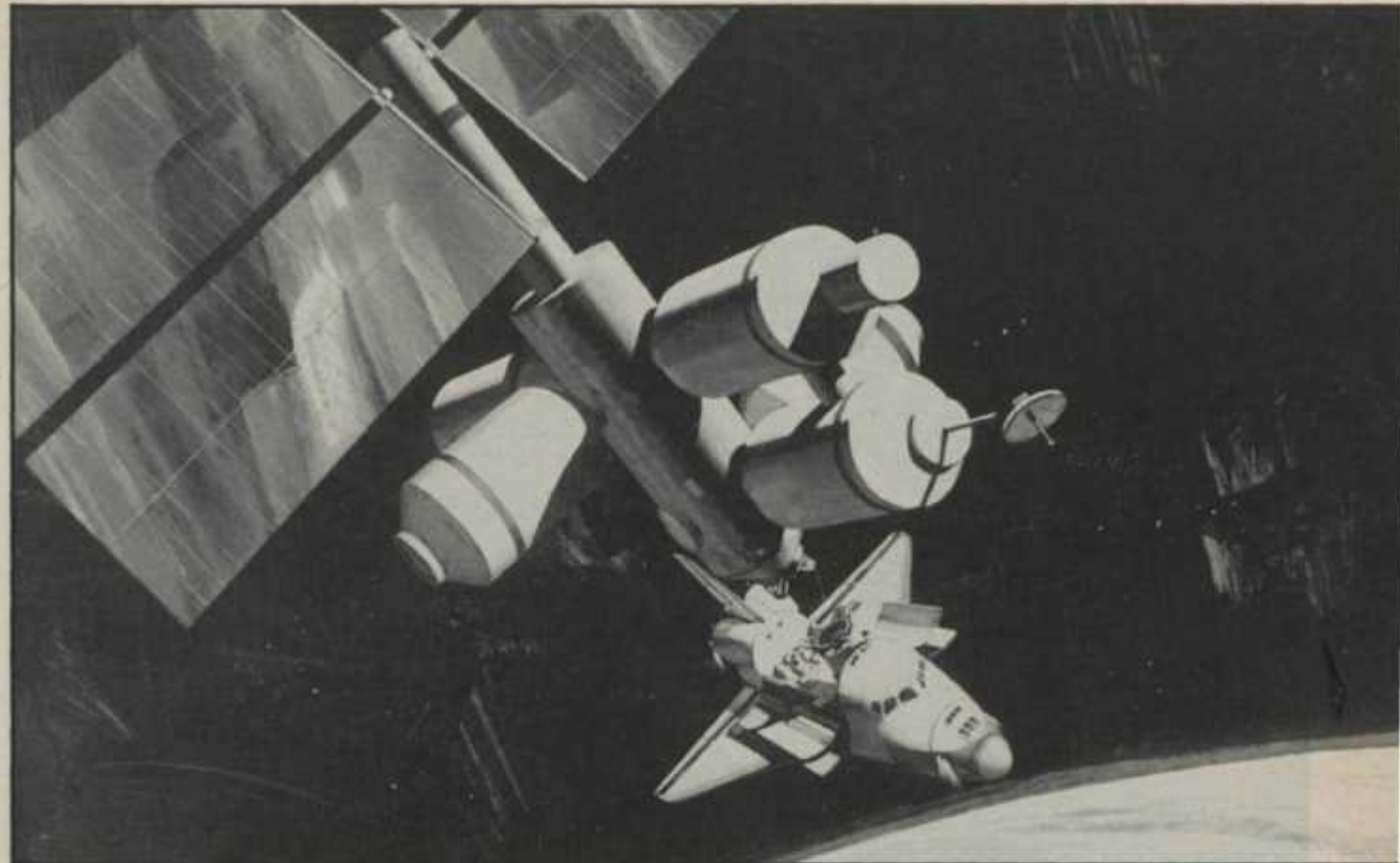
New England Research Application Center, Mansfield Professional Park, Storrs, Conn. 06268. Phone: (203) 486-4533.

North Carolina Science and Technology Research Center, P.O. Box 12235, Research Triangle Park, N. C. 27709. Phone: (919) 549-0671.

Technology Applications Center, University of New Mexico, Albuquerque, N. Mex., 87131. Phone: (505) 277-3622.

Technology Use Studies Center, Southeastern State University, Durant, Okla. 74701. Phone: (405) 924-0121, Ext. 413.

Western Research Applications Center, University of Southern California, University Park, Los Angeles, Calif. 90007. Phone: (213) 741-6132.



The shuttle docking with a space station to service it. This type of space station could very easily accommodate experiments in the small-scale manufacturing of any number of products.

logical sensing apparatus aboard future Landsat satellites.

Dr. Henderson believes that this, along with missions performed by the shuttle, has the potential for creating an earth resource and environmental information system that would give immense aid to the world geological community.

"Such a system will assist us in at least a partial solution to the dilemma of this nation's declining domestic nonrenewable energy and mineral resources," he adds.

Spotting trouble on the farm

Landsats already have proven themselves as far as agriculture is concerned. This is particularly true in the case of wheat farming. The satellites can often spot developing plant disease before the farmer himself. In time, scientists hope to be able to make precise, accurate predictions of wheat yields anywhere in the world. The impact this would have on future international wheat deals is obvious.

Last October, the St. Regis Paper Co. engaged NASA to use these satellites to monitor 1.7 million acres of valuable timber on company land in the southeastern United States. If the experiment is successful, the company says, it will provide information critically important to

timber inventory. Sensing devices aboard the satellites will, for example, tell foresters how tree growth is progressing as well as provide clues to timber yield.

The ability of these and future satellites to help solve many problems on earth will be greatly improved with the emergence of the space shuttle.

Repairing satellites in space will be possible for the first time, resulting in tremendous savings. The shuttle will, after firing them into orbit, be able to provide maintenance for a variety of satellites involved in weather forecasting, energy, navigation, fishing, mapping, oceanography, environmental protection, and many other fields.

Private-public partnership

Rockwell's George Jeffs believes that space industrialization will require a strong partnership of government and the private sector. He is equally convinced that the benefits will far outweigh the expense of these adventures in the world beyond.

"The new industrial revolution about to take place starting 100-plus miles over our heads in earth-orbital space may ultimately lead to unforeseeable payoffs," he says.

"As we begin to expand our capabili-

ties through the space shuttle, more and more people on earth will become space beneficiaries."

Mr. Jeffs notes that space offers possibilities both in improving old products and producing new ones.

Capturing solar energy

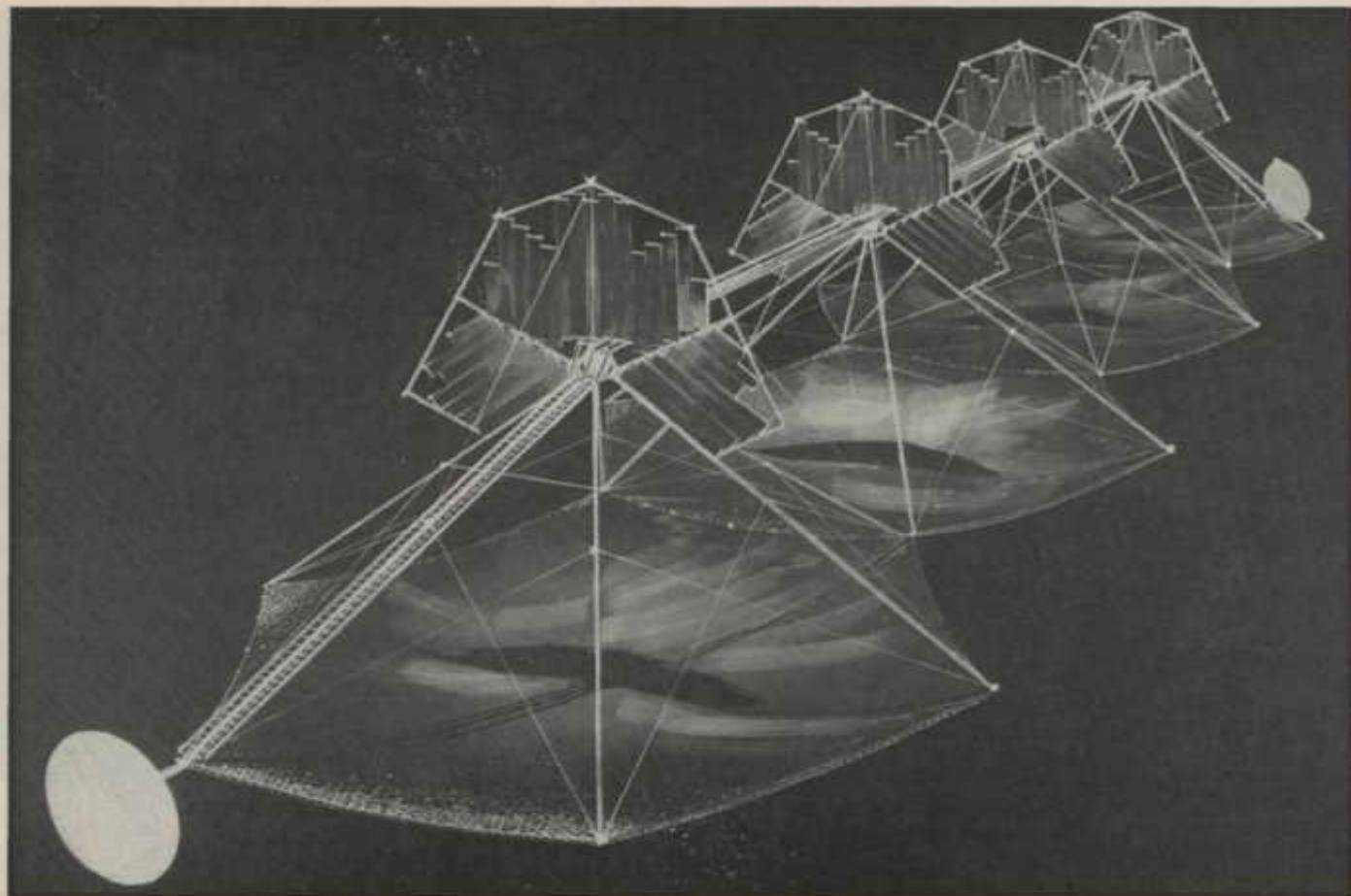
Space industrialization, he says, can help lay the groundwork for the first massive capture of solar energy. The shuttle will make it possible to erect large structures in space, he says, and this will result, as technology is developed, in construction of the first solar power station high above earth.

"I don't think industry will take the lead here because of the huge costs involved," Mr. Jeffs says. "Government will have to lead industry by the hand in the initial phases. But when the time comes for industry to step in, industry will be ready."

A pilot project could be completed by 1990, about the time the current shuttle program is ending, Mr. Jeffs says.

"Before the century ends, we can be tapping solar energy with satellites," he says. "It won't solve all our energy problems, but the contribution will be meaningful."

He adds: "I believe that once the technical and economical feasibility of a



Here is the Boeing Aerospace Co.'s concept of a four-segment solar power satellite stretching 14.7 miles across space. The round discs are the satellite's transmitters.

space-power system has been demonstrated, even on a small scale, utility and other companies will participate in financing construction and operation of such systems."

Dwarfing Apollo

George Jeffs believes spin-offs from the shuttle program will dwarf those which came in the wake of Apollo. And those numbered in the thousands, bringing improvements in health, manufacturing, transportation, and many other fields.

"Apollo was an exploratory and learning phase," Mr. Jeffs says. "Now that we know we can operate in space, we will have to develop the technology to provide more for earth. This is not a hit-or-miss affair. We will be concentrating on larger payoffs for the public. That's what we're thinking about now."

Mr. Jeffs underscores the economy aspect of the shuttle when he says:

"We will be able to conduct an experiment on the shuttle without having to build a very expensive satellite around the experiment. Today, if we want to put on a \$200,000 experiment in space, we have to wrap a \$10 million satellite around it, and we get to use it only once."

The shuttle will enable scientists to

conduct experiments of short duration as well as lengthy ones. Short-term experiments can be carried out on the shuttle itself. Longer experiments will be put aboard platforms built by shuttle workers and will be left in space.

"We can return to these platforms as often as necessary and tend the experiments just the way a farmer tends his crop," Mr. Jeffs explains.

Communications platforms, solar power satellites, meteorological and climatological platforms, and even satellites relaying vital lifesaving instructions—these all will come along with the advent of the shuttle.

The next generation

Mr. Jeffs is eager for the United States to start thinking about the next generation of space shuttle travel, which he says will be in the magnificent heights of geosynchronous orbit—22,000 miles and above—rather than in the low earth orbit range of the pioneer shuttles. There are no plans for space shuttle operations in the 21,600 miles between these two orbit levels.

"I strongly believe," Mr. Jeffs told a congressional committee, "that we must be in a position, technically and operationally, by the end of the next decade to be able to make commitments neces-

sary to have large operational space centers on line by the end of the second decade."

No less sanguine about the potentials of space industrialization is Econ's Klaus Heiss, who says:

"With the successful completion of the space shuttle system, a new era of space transportation, leading potentially to a full industrial use of the space environment, will set in."

Dr. Heiss also has this to say about what lies ahead:

"Of all the resources awaiting mankind out in space, energy clearly is the single most abundant and most important. The question is not if mankind will ever make use of this resource, but rather when and on what scale."

Active role for business

American companies will play an active role in the effort to capture the energy of the sun. NASA has let out contracts to a number of firms to come up with ideas on how this nondepletable source of energy can be transformed into usable electricity.

The Boeing Co., for example, has been engaged in research on solar power satellites since 1972. A satellite of this kind might be the size of a small city and be able to produce twice the power gen-

Los Angeles company executives

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Check the information you'd like on the attached postage-paid reply card or ask Steve Smart (213) 485-8761 for more information or a copy of the question and answer booklet: "What every company president should know about domestic satellite communications."

RCA American Communications, Incorporated, 201 Centennial Avenue, Piscataway, New Jersey 08854.



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A giant elliptical antenna could receive microwaves beamed from a solar power satellite and transform them into electricity.

erated by Grand Coulee, the nation's largest hydroelectric dam. Forty-five such satellites could match the present total electrical generating power of the United States, freeing oil, coal, and their derivatives for other crucial needs.

Solar power satellites either would be constructed in low earth orbit for later shipment to the higher geosynchronous orbit or would be constructed directly at the higher orbit, according to Boeing.

Getting the men and equipment into space to build such a satellite would require a complicated transportation system. The construction equipment could be shipped aboard reusable large, unmanned freighters—heavy lift launch vehicles—and deposited at a space construction base. Work crews could travel to the construction site on a shuttle.

The costs, obviously, would be staggering. Likewise, the potential returns.

Fuel is free

Boeing has worked out an arithmetical plan indicating that the revenue from one solar power satellite producing 10,000 megawatts of electricity, sold at a rate of 30 mills per kilowatt (the current average cost of electricity generated by new oil-burning generating plants), would be \$78.8 billion in 30 years. Forty-

five satellites would produce more than \$3.5 trillion in revenues.

While solar power satellites would be expensive to bring on stream, the real payoff would follow. The sun's rays are free.

Dr. William Lenoir, one of the astronaut scientists who will fly the shuttle, told NATION'S BUSINESS:

"I think there is a great opportunity to capture solar energy. Now we have a chance to go up and learn more about it. The shuttle will give us the economics of what it will cost to build things in space."

Giant Erector-set parts

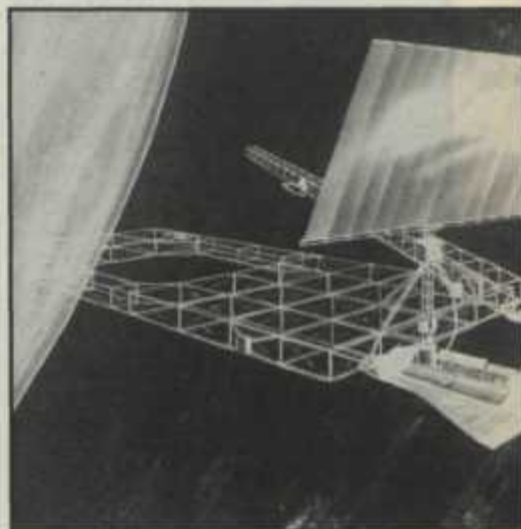
Dr. Roger W. Johnson, the director of NASA/Civil Space Programs for Grumman Aerospace Corp., is considered an expert on space industrialization. He says the technology exists today to build five-by-eight-kilometer solar power satellites, each capable of producing 5,000 megawatts of power, and beaming the power to earth as microwave energy.

"We have the engineering, we have the paperwork behind us," he told NATION'S BUSINESS. "We can build a space-power station by 1995 if we are prepared to spend from \$15 billion to \$25 billion. We're talking about an investment on the level of Apollo."

He adds: "The visionaries will have to



NASA Administrator
Robert A. Frosch



Shuttle crews will use a solar panel for power in building space platforms.

look beyond the shuttle and assume this will happen."

Dr. Johnson predicts automated fabricating machines will be installed on space platforms that will turn out half-mile-long metal beams like giant Erector-set parts which technicians, working from the shuttle, will assemble into huge energy-gathering satellites.

"But remember, the kind of project we're thinking about is twice as complex as the Alaskan pipeline," he points out. "The energy crisis is not as acute as it has to be to force us to find these long-term solutions in space. That could come in another two or three years."

Experiences collected in the building of a solar satellite will make possible the development of the technology needed to start building factories in space, according to Dr. Johnson. "We will have learned more of what the productivity of man is like working in this kind of environment," he says.

Dr. Frosch, the NASA administrator, agrees that the shuttle will offer many challenges to industry, but he is not so sure how fast industry is willing to move.

What are the ground rules?

"There is still a lot of uncertainty as to what the ground rules and risks are going to be," he explains, adding: "Until

ANOTHER ANGLE ON SPACE RESEARCH: ANGLING

A multimillion-dollar space device is helping one outdoorsman get more fun out of his favorite sport, bass fishing.

Dr. Alden P. Colvocoresses, a mapmaker with the U. S. Geological Survey, uses photographs from Landsat-1, an earth resources survey satellite that orbits the earth 14 times daily snapping pictures, to find out where the fish are biting.

It works like a charm, he says.

Dr. Colvocoresses came up with this unusual technique for spotting the habitat of bass while using Landsat photographs to revise maps for the Geological Survey. Studying a shot of the state of Virginia one day, he found his favorite fishing haunt, Lake Anna, about 35 miles north of Richmond. The lake was created by the Virginia Electric and Power Co. as a huge cooling pond for a proposed nuclear power plant.

Long hours of fishing on Lake Anna had convinced Dr. Colvocoresses that the wily bass like to feed in relatively shallow areas near deeper waters to which they can dart if danger threatens. By comparing a series of Landsat photographs taken while Lake Anna was being filled with water, he was able to pinpoint a section of the lake where, he was convinced, the elusive fish lay.

"I was right," he told NATION'S BUSINESS. "Within ten minutes of my first cast, I caught a three-pound bass. I've done well a number of times since. My best catch was a 4½-pounder."

Dr. Colvocoresses is quick to explain that the technique only works if you have access to a series of Landsat photographs showing water at various levels.

ALL ABOARD THE GETAWAY SPECIAL

A Rotary Club in Houston. A Coors Beer distributor. Johnson & Johnson. A producer and a director at Columbia Pictures. Ten Rockwell International employees. Ford Motor Co. A German consultant. Purdue University.

All have something in common. They have booked space on the space shuttle. Not for rides as passengers, but for conducting small scientific experiments.

If you hurry, you can do likewise. For only \$3,000 (\$500 down), the National Aeronautics and Space Administration will set aside 1½ cubic feet for you on a shuttle flight some time in the 1980's. You can reserve up to five cubic feet (cost: \$10,000).

NASA has dubbed this service the Getaway Special. The idea for transporting small, self-contained payloads along with the regular full-scale, highly sophisticated scientific experiments is a public relations coup for NASA. It provides an opportunity for many people to enjoy direct, inexpensive participation in a multibillion-dollar space extravaganza.

Retired Navy Capt. Chester M. Lee, NASA's space transportation director, says he has commitments for bookings for both large and small payloads, indicating that available flights from 1981 through 1983 will soon be sold out. The first year of operations—1980—is set aside for a half-dozen test flights and for conducting large-scale experiments.

The rules for getting aboard the Getaway Special are rather simple. Experiments must meet safety requirements, be of a scientific or research nature, be restricted to peaceful purposes, and be in good taste.

"We have had to turn away a few speculators who wanted to send up hunks of metal and later sell pieces as souvenirs or who wanted to send up postage stamps and sell them at high profit," Capt. Lee says.

People booking space on the Getaway Special must file with NASA, at least a year in advance of their assigned flight, a detailed description of their planned experiment. Virtually

none of the early applicants have indicated what kind of experiment they want conducted aboard the shuttle.

Dr. Rex McGill, a physics professor and director of the Aeronomy Center at Utah State University, put up his \$500 down payment early and assigned the space to his university. Utah State is awarding three four-year scholarships annually to high school students who come up with the most imaginative and practical experiments they would like to see conducted aboard the shuttle.

Dickshire Coors, an El Paso firm that distributes Coors beer, wants to turn its allotment into a community project. It would like to see science seniors in El Paso high schools and science students at the University of Texas in El Paso come up with proposals for an experiment.

H. E. Emigh, a Rockwell engineer, and nine of his fellow employees are on the reservation list. Mr. Emigh says:

"We are heavily involved in space, and we think this is a marvelous opportunity to help encourage more utilization of the space program. We will probably offer our share to some university."

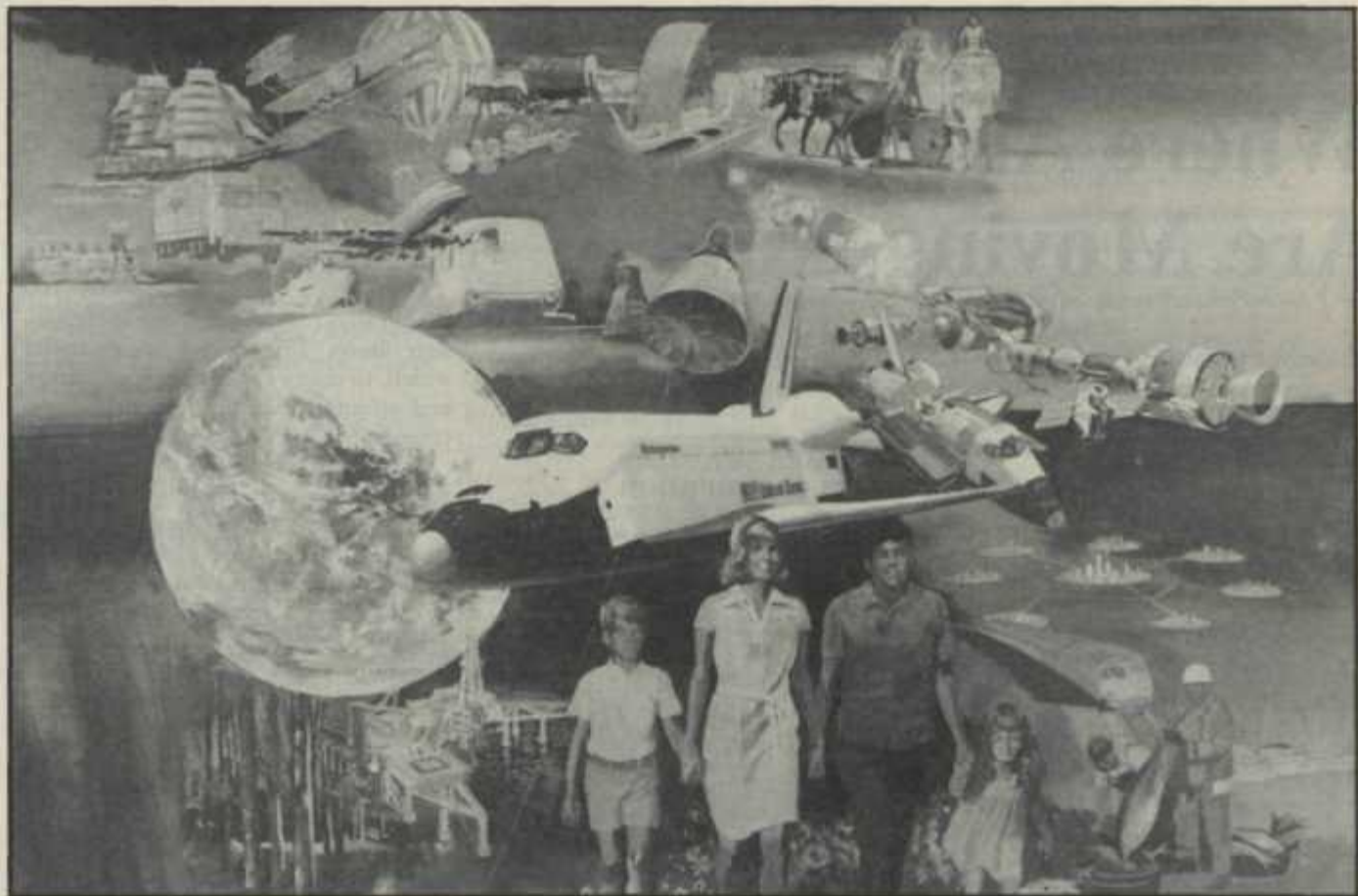
At Johnson & Johnson, a spokesman for the medical products firm says: "We are simply reserving our place in line. We have no particular experiment in mind."

Michael Phillips and Steven Spielberg, producer and director, respectively, of the hit movie, "Close Encounters of the Third Kind," a fictional account of visitors from outer space, have jointly bought two spaces on the Getaway Special. Mr. Phillips told NATION'S BUSINESS:

"We're interviewing people with ideas of what we might do aboard the shuttle. It might or might not have to do with films. You can be assured that Steve and I will put our imagination to work."



Capt. Chester M. Lee



... Meeting the challenges of the future.

now, space has been largely a government-funded business, and the government took most of the risks."

Dr. Frosch does predict continued private investment in satellite communication because that has already proven itself. He says the next most promising area for private activity is commercial data services, where the market is wide open for development. He believes the big payoff for the shuttle will come when it begins to demonstrate its great flexibility and its ability to accomplish things never done before in space.

The merits of the shuttle aside, the NASA chief is convinced that the United States can only come out ahead with the high technology that will be developed as a result of space probing in the next decade or so.

Lifeblood of industry

"The argument that high technology is a drain on the national economy is nonsense," Dr. Frosch asserts. "I have never seen a good case made for it."

"On the other hand, if you take a look at those industries in the U. S. that have turned their backs on high-technology spending in the past 25 to 50 years, you are looking at some dying industries or industries that are in deep trouble. If you want to kill off an industry, just let the

technology remain static for a few years."

Econ's Dr. Heiss has no doubt that space exploration will result in colonization in the skies. He says:

"The establishment of space habitation will be an evolutionary outcome of the current United States space program. Mankind will achieve in the next 100 years the most significant accomplishment yet: true earth-independent, self-support systems which will lead to the establishment of a multitude of new, different, and enterprising civilizations."

NASA is not yet ready to ask Congress for money to start building space colonies. But the agency obviously watches with interest any serious discussion of the subject.

Probably the most serious scientific look to date at the concept of space colonization took place during the summer of 1975 at Stanford University and nearby Ames Research Center. For ten weeks, a group of engineers, physical scientists, architects, social scientists, and others met and designed a plan for creating a city in space to accommodate 10,000 people. Estimated cost: \$190 billion.

Preposterous? A lot of serious-minded people don't agree.

The orbital space shuttle is being

readied to take its place in the second chapter of space history. For the United States—indeed, for all mankind—it offers opportunities of tremendous scope.

A fantastic monopoly

Why a space shuttle? Perhaps the clearest answer is contained in a statement read to a congressional committee by George Jeffs, of Rockwell International. The statement, by Richard Leshner, president of the Chamber of Commerce of the United States and a former associate administrator of NASA, is as follows:

"Imagine that the year is 1492, and only one country in Europe has an oceangoing ship capable of making round trips to the New World. Consider what such a monopoly would have meant to that country."

"Now consider this: The year is 1977, and only one country has a spacecraft capable of making cargo-carrying trips into space and back. The country is the United States, the spacecraft is our new space shuttle, and the significance of our position is fully comparable to my hypothetical European country on the eve of Columbus's famous voyage." □



To order reprints of this article, see page 62.

THE NEW MIGRATION SHIFT

Where Americans Are Moving Now

By Grover Heiman

Population trends show a surprisingly strong rural renaissance. Here is an examination of these trends which have a major effect on business



The living is quiet and easy at Joe's Pond, in West Danville, Vt. Yearning for this type of life is one of the main reasons for the migratory boom in rural America.

THE MASS MIGRATION to the sunbelt may have made America appear to be "a nation of lemmings," says Prof. Charles L. Leven, of St. Louis's Washington University, but since 1970 "we seem to have become a nation of mountain goats."

What happened to the scramble to the sunbelt?

It is still going strong.

Between 1970 and 1975, the South gained more than five million in population and the West, nearly three million. At the same time, the North Central states added only one million,

and the Northeast added 300,000.

When you look beyond the gross figures, however, a new trend appears. While metropolitan areas in the South and West continue to gain people at a robust clip, the new phenomenon is the rapid growth of our nonmetropolitan areas, especially in the Appalachian and Rocky mountains regions.

Rural reversal

The nonmetro sectors of the Northeast, for example, are gaining population at the same percentage rate as nonmetro regions in the South and nu-

merically as much as nonmetro areas in the West and North Central states.

In 1950, ten percent of the nation's rural counties were gaining through in-migration. The other 90 percent were exporting people, most of them young and bright. Today about two thirds of those counties are gaining through in-migration.

From 1970 to 1975, for every 100 people who moved out of nonmetropolitan areas, 131 moved in—statistics which, to many experts in Washington and around the nation, herald a rural renaissance.

This trend is certain to be a major topic of discussion in the future. The Carter administration has task forces studying the problems and prospects of both urban and rural development.

There was a foretaste of upcoming debates recently in Austin, at the University of Texas. A collection of scholars and government planners gathered at the University's Lyndon Baines Johnson School of Public Affairs, primarily to probe the growing economic confrontation between the sunbelt and the snowbelt. But wider recognition of the new American migratory trends also emerged from their discussions.

The new growth is not rural in the classic sense. Nonmetro territory is defined by the Census Bureau as all counties in which the largest urban nucleus is less than 50,000 in population and which do not have a sizable proportion of residents commuting to metropolitan centers for employment. These counties now include about 30 percent of the nation's population.

Surprising the experts

"Although it was apparent in the late 1960's that the new flow of rural-to-urban migration was ebbing, no one seems to have foreseen the rapidity and scope of the turnaround that has occurred in the relative growth rates of urban and rural areas," says one of the Austin conference's speakers, Kenneth L. Deavers, director of the Economic Development Division of the Agriculture Department's Economic Research Service.

The nation's farm population—obviously a key segment of nonmetropolitan areas—dropped from 30 million in 1940 to nine million in 1970. All through the 1940's and 1950's, farm population often dropped more than one million annually. The last year that happened, however, was in 1962, and since then the farm population decline has slowed.

From 1970 to 1975, nonmetropolitan

population increased 6.6 percent while metropolitan areas grew 4.1 percent. In every census region except the South, the population grew more rapidly in nonmetro areas than in metro areas.

There were other notable trends, too. Beginning in the 1960's, manufacturing became a more important growth sector for nonmetro areas than for metros. Manufacturing jobs grew five times faster in nonmetro areas than in metropolitan centers.

From 1970 to 1975, nonmetro areas accounted for 40 percent of the increase in nonfarm employment, expanding their share of such jobs to more than 25 per cent.

"This is the first time such a trend has been observed in modern history," says Mr. Deavers, noting that nearly two million people moved to nonmetro areas during the five-year period.

Into picturesque country

In the Northeast, nonmetro growth increased seven percent from 1970 to 1975, while metro growth declined 0.1 percent. Here the movement is into picturesque and more habitable nonmetro areas of northern New England, the Catskill and Pocono mountains areas, and the Atlantic Coast.

In the North Central states, nonmetro areas grew 3.4 percent, with the growth centering on north country woods and lake counties and the Missouri Ozarks. These are areas of relatively low land prices and incomes. Mr. Deavers finds that recreation, retirement, and manufacturing growth account for most of the in-migration, while most counties in the Great Plains and Western corn belt continue to lose population because they do not offer enough alternatives to farm employment.

By comparison, urban area growth in the South was a hearty 9.3 percent from 1970 to 1975, while nonmetro growth was 6.9 percent. Noticeably not participating in the new vigor were predominantly black counties which—unable to import or create enough job opportunities—continued to export people.

With the exception of the Florida peninsula, the rapidly growing nonmetro areas in the South are predominantly mountainous. They include the northern Piedmont, the South's Appalachian coal area, the Blue Ridge mountain area, the lower Tennessee Valley, the Ozark and Ouachita mountains of Arkansas, and the central Texas hill country.

"Various elements are present—revived coal mining, manufacturing, recreation, and retirement," Mr. Deavers notes.

Most rapid in West

The most rapid nonmetro growth is occurring in the West, where nonmetro areas' population increased 13.4 percent from 1970 to 1975, compared to metro areas' growth of 7.4 percent.

Coal, oil, gas, and uranium mining development produce some of the Western growth, along with the ongoing tides of retirees and recreation-seekers.

"Out-movements of highly motivated people into rural and small town settings are clearly evident, too," Mr. Deavers says, citing growth in the Sier-

He says it is unclear whether the 1970's trend of migration to nonmetropolitan sectors will prove to be long-term. The recent shift, he notes, coincided with and may be due in part to the recessions of the early 1970's.

"If so, a resumption of metropolitan migration would be expected with improvement in the economy," he says. "Although the latter has occurred, the former has not."

He adds that "the taste for rural living may persist, so that metropolitan and nonmetropolitan growth may coexist in the future."

Searching for opportunity

Mr. Morrison notes that the population in almost every region is "continually recomposed by a gradual

PHOTO SHIRAZI—BLACK STAR



The spectacular scenery of the Great Smokies (above) is one reason small towns in this area—and in the Ozarks, Rockies, Poconos—attract residents and industry.

ra Nevada foothills and southwestern Oregon.

He sums up the situation:

"The major contrast in regional population patterns is between growth of the West, the southeastern quarter of the United States, the north country of the upper Great Lakes, and northern New England on one hand, and the declining industrial-metropolitan belts of the Northeast and the agricultural areas of the prairies on the other."

Peter A. Morrison, of The Rand Corp., the West Coast think tank, was a participant in the Austin conference.

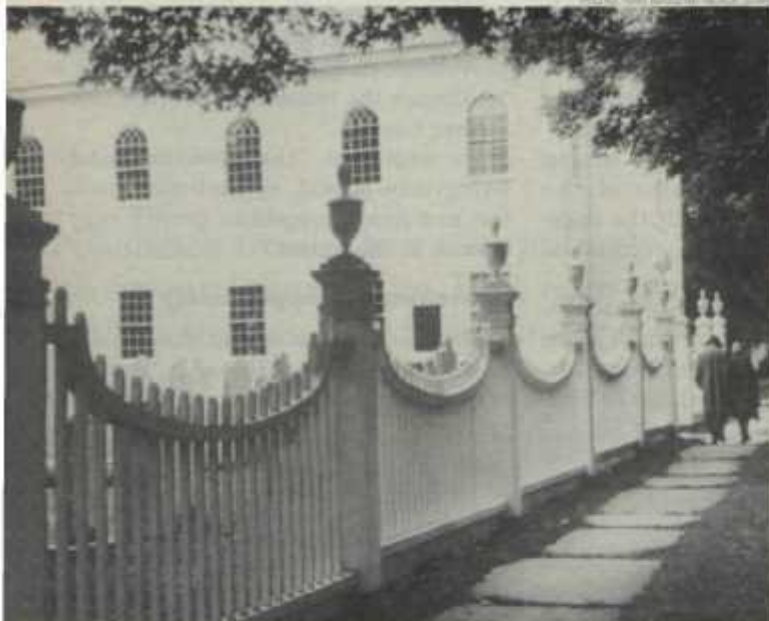
procession of migrants coming and going, for the most part deliberately."

This migratory tendency, he says, is a significant benefit to the American economy. And, while he concedes that searches for economic advancement are not the only reasons for the population shifts, he says the shifts show that Americans still seek opportunity.

"The view that personal success is achievable outside one's native region is a distinctive and deeply ingrained element of the American culture," he says. "It is a product of the persistent vacuum pull of economic opportunities

Where Americans

PHOTO: SAM BORDOW-BLACK STAR



Many thousands of Americans who are moving from metropolitan areas into rural settings obviously want a new pace of life, perhaps as depicted here: A stroll down a quiet street in Bennington, Vt.; a family outing on a California mountain stream; a jog down a tree-canopied road in Almost Anywhere, Rural U. S. A.; a natural swimming hole in the hills of Tennessee; seining for smelt on the rocky Oregon coast. The turnaround for rural America—from losing residents to gaining—is a new trend in the nation's continuing population shifts.



PHOTO: ROBERT BORDOW-BLACK STAR



PHOTO: SAM BORDOW-BLACK STAR

PHOTO: DAVIDSON-BLACK STAR



PHOTO: DAVIDSON-BLACK STAR

in other places, which enables alert individuals to exploit newly developed resources or knowledge quickly."

Impact of taxes

How persuasive a factor is taxation? Prof. Robert L. Lineberry, of Northwestern University, has investigated. "There is clear evidence that neither families nor firms weigh tax considerations very highly in choosing a location," he says.

Reporting on a recent survey of corporate headquarters moves, he says that the firms involved ranked taxes

as a far less significant factor in moving than other costs, such as labor.

He adds that the movement of families has been less carefully investigated than the migratory behavior of firms, but he says available information indicates that families are probably less calculating about taxes in a new community than are corporations.

The quality of life

The quality of life is a major factor in business decisions to locate in an area, Massachusetts Institute of Technology Prof. David L. Birch says.

Prof. Birch, also a speaker at the Austin conference, reports that a survey he and a group of colleagues conducted shows this is particularly true for service industries. He says:

"Executives increasingly find that, with interstate highways, high-speed, high-volume telecommunications, and an expanding network of jet airports, they can locate practically anywhere along the interstate system with little cost differential.

"Under these conditions, considerations such as climate, recreational opportunities, and physical beauty of the site play an increasingly important role."

Quality of life is important to young executives, says Peter H. Lauer, president of the Chicago-based executive search firm of Lauer & Holbrook, Inc. "Contrary to ten years ago, we are finding that many young executives interested in upward mobility are pinpointing the areas in which they are willing to live. They are interested in the challenge of a new position, but they want to be sure their families will be happy in the new location."

The firm is finding the same feeling in older executives. Many, after moving six or eight times, are calling a halt to further moves unless extremely attractive rewards are involved.

Jobs are key factor

A Labor Department monograph on why families move reports that families which have previously moved are more likely than others to move again, that unemployment or job dissatisfaction is often the key factor, that wives have a significant influence on decisions to move, and that education and age appear to be relatively unimportant factors.

Washington University's Prof. Leven told the Austin conference that an examination of Americans' migratory habits shows that "we seem rather good at inventing socially acceptable reasons for explaining why what is most profitable is the most wholesome."

As a classic example, he cites a whole generation of Americans seeking cheaper housing, but claiming they were moving to the suburbs for the sake of their children. More recently, he says, a common explanation for eco-

"A LOT OF OUR YOUNG PEOPLE ARE COMING HOME"

To get out of town, residents of Corsicana, Texas, jokingly say, you have to go to jail first. That's because the old city jail, replaced recently by a new one, has been converted into a travel agency office.

Business leaders hasten to add that people aren't leaving the north central Texas area like they once did. For the first time since 1940, more young people are staying than leaving. On top of that, Yankees are moving in.

Until 1970, Navarro County, which is an hour's drive south of metropolitan Dallas, was a typical nonmetro county. It suffered from rapid out-migration for four decades.

In 1930, the county, including Corsicana, had a population of 60,507. By 1970, the population was down to 31,150. Then, as happened in many nonmetro counties, the migration trend reversed with stunning suddenness. The latest estimate has more than 35,000 people living in the county, 21,000 of them in Corsicana.

New energy sources have been the cause of growth in some nonmetro counties. However, this is not a major factor in Navarro County, which has long been energy-rich. The county was the site of one of the earliest oil booms. Oil was discovered there in the 1890's when Corsicana, the

county seat, drilled for artesian water for its fire department and tapped a petroleum pool a few hundred feet down.

Oilmen and drillers came flocking in, and Corsicana was hailed as a future major city. Not only was there oil, but rail lines ran north and south and east and west, and the thick black soil of the surrounding county yielded rich cotton crops.

But, as in so many nonmetro counties and small cities, mechanization of agriculture reduced job opportunities, and employment in big cities siphoned off the young. The 1940 census showed the population of Corsicana had risen only 230 in ten years, to 15,232. In the same decade, the county's total population fell 9,000.

At the end of World War II, the Corsicana Chamber of Commerce, on a small budget, sought new businesses. The move had limited success. The first newcomer was a hat factory. Slowly, other light industries came, too, and the city's population climbed more than 1,000 between 1950 and 1960. In the same period, however, the total county population dropped more than 5,000. And between 1960 and 1970, both the city and the county as a whole lost population.

Since then, both the city and the county as a whole have been on a growth path.

Arthur J. Keeney, publisher of the "Corsicana Daily Sun," says the number of households in the city is increasing between 1.5 and two percent annually. Building permits set a record in 1977.

"A lot of our young people are coming home," observes Paul Moore, retired "Sun" editor. "And there isn't a cotton gin in town."

Cotton is no longer the linchpin of the local agricultural economy, having been replaced by sorghum, says Rex Carpenter, executive vice president of the Corsicana chamber. New jobs are coming from a diversified economy. The unemployment rate is 4.6 percent.

While the metro sprawl from Dallas and Fort Worth is reaching south along Interstate 45, only a small percentage of the area's residents commute to jobs in the cities to the north. There is an unabashed determination not to lose the small town atmosphere.

"People are moving here because they like the life here," Mr. Carpenter says. "We are working for payrolls, but we are also working to keep our quality of life. We can have both with a good, modest rate of growth."

nomically sound moves from urban areas is a desire to avoid crime.

All in all, he says, it is difficult to generalize intelligently about why people favor one region over another.

Back to the cities?

Gerald Duskin, a senior economist in the Commerce Department's Economic Development Administration, predicts that, while there won't be a massive movement of industries back to urban centers, there will be some reversal of the trek away from these centers.

There will be a concerted examination of migratory trends in Washington this year.

The snowbelt states will strive to make the point that a prime reason for their losses of people and jobs is imbal-

ance created by the federal government. They will want a larger share of the defense dollar and other federal payments. Undoubtedly, there will be emphasis on the job situation in the metropolitan areas of the Northeast and North Central regions and in the rural poverty pockets of the South.

Economic planning fears

While some federal government actions that have spurred population shifts are reversible—actions in such fields as freight rates, investment tax credits, depreciation allowances, and use of tax exemptions to borrow for new construction—some are not.

The Commerce Department's Mr. Duskin says the most important factors affecting the migration of people

and jobs in recent years have been the construction of the vast interstate highway system and of the inland waterway system.

These are irreversible.

The fact that there has been a shift in population not only to the sunbelt but to nonmetro areas everywhere may mean that there will be economic confrontations between parts of regions and parts of states, as well as between regions.

At this point, business fears such confrontations may lead to more support for national economic planning.

Business people may be inclined to quote the late H.L. Mencken, who said: "There is always an easy solution to every human problem—neat, plausible, and wrong." □

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"I AM MY OWN MAN!"

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What to Do When the OSHA Inspector Knocks

What to do about OSHA

steps to take
before, during and
after inspection



Chamber of Commerce of the United States

SOMEDAY when you least expect it, an Occupational Safety and Health Administration inspector may knock on the door.

What should you do? Demand a warrant?

In some states the OSHA inspector must present a warrant if the employer demands one. In most states there is no warrant requirement. The Supreme Court is expected to render a decision this winter on a controversial ruling by a federal court in Idaho that the law establishing OSHA is unconstitutional because it does not make warrants necessary.

"You should be aware of the current status of the law in each place where you have employees working," advises Christine Waisanen, an attorney for the Chamber of Commerce of the United States of America who specializes in OSHA matters.

"If you do plan on making a warrant demand, be sure you have discussed the subject thoroughly with your attorney. And it's best to have the attorney with you when you make the demand."

Helpful new manual

Such advice is contained in a new National Chamber publication that tells employers how to get ready for the knock on the door and what to do when the inspector is prowling the premises and when he or she has left.

The booklet, entitled "What to Do About OSHA," is the first in a series on government agencies' procedures being prepared for businesses by the National Chamber. To be published at a later date will be manuals on dealing with the Environmental Protection Agency, Consumer Product

Safety Commission, and Employment Standards Administration and on the broad subject of antitrust action, including Justice Department and Federal Trade Commission practices.

"An OSHA inspection is an adversary procedure," Ms. Waisanen says. "Always be polite, courteous, and helpful while at the same time protecting your own interests. Don't argue, no matter how absurd some things may seem. You can always fight them on higher ground."

The booklet on OSHA contains a host of invaluable information. Covered, for example, is official identification, which a compliance officer must produce before stepping inside the premises.

Is he an impostor?

"The inspector—compliance officer—must have proper Labor Department credentials, which will include a photograph and a serial number that can be verified by phoning the nearest OSHA office," says Ms. Waisanen. Anyone accompanying the compliance officer must have proper credentials, too.

There is no record so far of impostors, Ms. Waisanen says, but a sure sign would be anyone who tries to collect a fine or sell a product or service.

Then there is the matter of when the inspector may knock. He or she is off-base if the arrival at the firm's door is not during normal working hours or at another reasonable time.

"You can tell him or her to come back at a better time," Ms. Waisanen advises. An inspector is not supposed to arrive at odd hours without ap-

proval from the area OSHA director.

In easily understandable prose, the booklet informs the business person of the step-by-step process the compliance officer must follow—including the opening conference with the employer, the walk-around inspection, and the closing conference with the employer—and the steps the employer must take immediately after the inspection is over.

Also, the new publication answers such questions as: When may I be cited? What are the possible penalties? Are there time limits to watch? How do I know if I should contest? What happens in an informal conference? In a contest? In an appeal?

Heavily emphasized throughout the booklet is the good faith caveat in the Occupational Safety and Health Act of 1970. Ms. Waisanen says the best thing you can do regarding an OSHA inspection is to be prepared beforehand.

Before the knock

"You should know what standards cover your business and what hazards exist," says Ms. Waisanen. "You should abate the hazards to the best of your ability. Even if you are fined later, your good faith efforts can reduce a fine for a serious violation by up to 30 percent."

Unfortunately, she points out, there is no simple list of OSHA standards an employer must comply with, and sometimes the agency's directives conflict with those of other agencies.

"Conducting a standards search is one of the minimal requirements under the law," Ms. Waisanen says. "It may be the most dreaded step that

employers face, but it is the necessary beginning."

Currently there are more than 5,000 OSHA safety standards and 15 health standards, and the number in the latter category is growing rapidly. OSHA has a 40-page booklet that indexes and summarizes general industry requirements in 84 different areas, and it has specialized booklets dealing with safety and health standards.

"The OSHA publications do not, however, cover all the standards," Ms. Waisanen says. "Since you are responsible for compliance, you should be aware of all that apply to your industry."

Even when there is no standard covering a hazard, OSHA can cite employers for violating the 1970 act's general duty clause if the violations are considered to be serious, or if OSHA finds them willful or repeated.

The quicker the better

Ms. Waisanen says that the quicker a hazard is ended or reduced, even if by a temporary or second-best method, the better.

"Obviously, to abate hazards in the workplace, the employer must find them first," Ms. Waisanen says, emphasizing that additional steps should be taken before the inspector knocks.

A key move, she says, is to conduct a thorough self-inspection. Also, in anticipation of the arrival of the man from OSHA, the business should establish a suitable record system; religiously place on a bulletin board OSHA posters, reports, citations, and other required notices; set up a sys-

in lower insurance premiums, but—most importantly—because they may result in better safety and health for employees.

Chances of being inspected

The National Chamber publication also tells the employer what to do if there are problems with meeting a compliance deadline, how to get consultation, what to do if you can't afford to comply, steps to take if you have a better method of complying, and the chances of your being inspected.

For most firms, the chances of in-

spection have been greatly lessened by the new OSHA concentration on high-risk health and safety problems. Secretary of Labor Ray Marshall and Dr. Eula Bingham, the assistant secretary who heads OSHA, have declared war on nit-picking regulations that have angered businesses over the years.

Because of this, and considering the present size of the OSHA inspection staffs, across-the-board chances of being inspected are one in 50.

But the inspections continue, and the knock can come anytime for most American businesses. □

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"What to Do About OSHA" is available from the Chamber of Commerce of the United States, Attn. Data Processing, 1615 H Street N. W., Washington, D. C. 20062. Price per copy: \$5 for one to nine copies; \$4 for ten to 99 copies; and \$3.50 for more than 100.

tem to report certain types of accidents; and maintain a continuing program of keeping up-to-date on OSHA changes.

Particular attention should be given to taking voluntary good faith measures, such as forming safety and health committees, not only because these efforts will be a consideration in the event of a fine and may result



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LESSONS OF LEADERSHIP

How John Ricker Cuts Big Problems Down to Size

By Sterling G. Slappey

The self-styled country boy who heads The Continental Corp., one of the world's oldest and largest financial companies, came up through marine insurance and saw action in the Navy. He runs a tight ship

JOHN BOYKIN RICKER, JR., speaks in a drawl that lets you know right off he comes from the Deep South.

He has spent much of his life among the upper floors of faceless towers in the financial district of Manhattan, and you might surmise that he would be sounding different by now.

But no, this New Yorker comes from Augusta, Ga., by way of Memphis, Tenn., and his speech is strictly Johnny Reb.

John Ricker has come a long way—all the way to the chairmanship and presidency of The Continental Corp., one of the world's oldest and biggest financial enterprises. Continental's largest line of work is insurance—The Continental Insurance Companies. But also under its tent is a variety of credit

activities—it owns Diners Club, AFCO Credit Corp., and Capitol Financial Services, Inc.

Out of a profit squeeze

Mr. Ricker has guided Continental into a period of great prosperity and out of the poor profit years that beset the insurance industry earlier in the 1970's.

Latest figures available for 1977 show that, during the first nine months, net profits were \$176.5 million, as against \$69.5 million during the corresponding months of 1976. For all of 1975, net profits were \$86.6 million. For 1974, they were \$54.7 million.

As befits a man whose route to the top was largely through the ranks of Continental's marine insurance division, Mr. Ricker's office, high in a skyscraper at 80 Maiden Lane, overlooks the restored sailing ships, old wharves, and chandlers' warehouses of the South Street Seaport Museum on the East River.

Mr. Ricker is a clean desk man, and often, when he has disposed of another piece of business, he stands at his window and looks out over the river that leads down to the sea.

This brings back memories not only of marine insurance, but of a historic day in June of 1944. On that day, just off Utah Beach, he and the sailors of the small U.S. Navy ship he commanded acted as traffic cops in directing American assault forces in the Normandy invasion.

Lt. Ricker's ship was among the first to reach Normandy, and 24 waves of Americans were directed ashore before the ship was called out of the hail of German fire. He got a Bronze Star that day and, as further reward, he was sent to the Pacific to take part in the invasion of Okinawa.

To this day, he loves the Navy, ships, and the sea.

Up the ladder

He loves the insurance business even more.

John Ricker was only a few days out of Southwestern College in Memphis with his economics degree in hand when he joined the Cotton Fire & Marine Underwriters Corp. The Memphis-based company later became part of Continental.

Mr. Ricker was moved around in subsequent years, serving for a time in New York and in Birmingham, Ala. Then came World War II. Afterward Mr. Ricker went back to Cotton Fire & Marine, and again he was shifted from city to city. By 1963 he was in New York permanently and on the way up the ladder.

He became executive vice president of The Continental Corp. and The Continental Insurance Companies in 1972, president in 1974, and chairman in January, 1976.

Mr. Ricker, 60, has many strengths. One is that he likes people. He considers his business to be people-oriented as well as money-oriented. When he walks down the hallways at Continental's headquarters, employees greet him cheerily—more as a co-worker than as the boss.

One subordinate was asked: "Does Mr. Ricker kick tails around here when things go wrong?" The questioner got a cold stare and a one-word answer: "No."

Someone else to take over

Back in the early days in Memphis and in the Navy, Mr. Ricker learned a lesson of leadership that he still practices. It is: "Always have a qualified relief on deck for yourself."

His qualified relief at Continental: seven corporate division heads who report directly to him.

Mr. Ricker's business world includes 46 Continental operating companies and 26 affiliates in 75 countries. He keeps track of activities through the seven division heads. All are on the same floor, and there is much back and forth between them—telephoning, memo-writing, conferring in hallways.

This closely knit operation was set up by Mr. Ricker, in a drastic reorganization, when he became chairman. Before then, 25 department and division heads reported to the chairman.

"About seven is the right number of people to hear from," John Ricker says. "Any more, and you might hear too much."

A busy headquarters

There seems to be a great deal more activity at Continental's headquarters than at the home offices of many other large companies. People are busy,

their heads are down, they are doing things. The water fountain is deserted, and you don't see many coffee mugs on desks. Not many conversations involve the New York Jets, Mets, Knicks, or Rangers. Instead, conversations are about business and shipping, and about what is happening in Continental's far-flung empire that includes operations in countries ranging from West Germany to Malaysia and from Argentina to Canada, as well as in the 50 states, the District of Columbia, Puerto Rico, and American possessions.

Religious man

To keep track, Mr. Ricker gets up at five o'clock on many workdays, but he almost always has eight solid hours of sleep.

"I'm a country boy from Georgia, and I need my sleep," he says. "I hear people, even doctors, say: 'I feel terrible. I only slept four hours last night.' Not me. I get eight, and I usually feel great."

He gets his nightly rest in Essex Fells, N.J., where he lives with his wife, Jane, and their two sons. Things are quieter there than in Manhattan. "Besides, it's an easy commute to my office—one hour, door-to-door," Mr. Ricker says. "We moved there from Memphis, and now we wouldn't live anywhere else."

The Rickers are churchgoing Episcopalians, and Mr. Ricker often refers to the Bible. He is active in several religious organizations.

When you ask Mr. Ricker whom he looks up to most, he thinks hard for a long time and comes up with: "Jesus, or God."

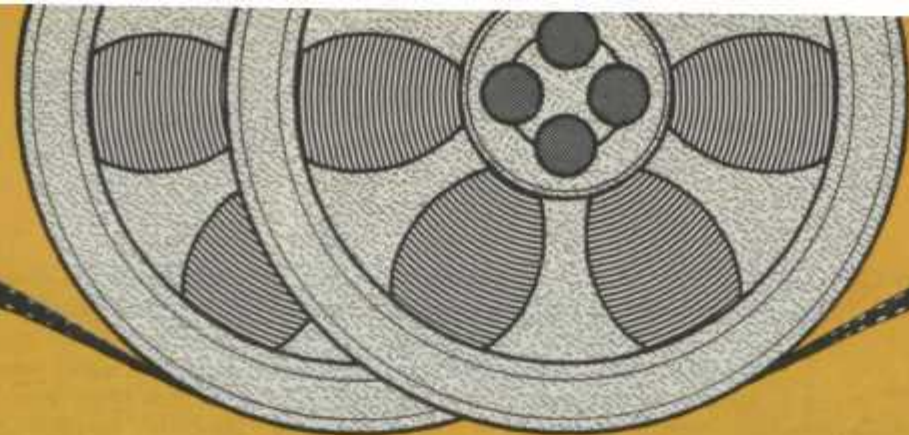
He explains quietly: "I'm from the Bible Belt, you know."

Three hobbies

John Ricker is no single-hobby man. He has three, and he works at them.

He takes cameras with him nearly everywhere he goes, and on last count he had 92 large albums of mounted, cataloged photos. "Often, I go back through the albums and see people of a long time ago," he says. "And I see places of a long time ago. I get pleasure out of that."

Reading is another hobby—business books, people books, books on world



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The Organs of Voice and Respiration. 67 pages on the larynx, trachea, lungs, etc.

The Male Organs of Generation. 14 pages on the prostate glands, penis, testes, etc.

The Female Organs of Generation. 15 pages on the clitoris, vagina, ovaries, pregnancy, etc.

The Surgical Anatomy of Hernia. 20 pages including scrotal and femoral hernia.

General Anatomy or Histology. 73 pages on the animal cell, nutritive fluids, blood, the skin, secreting glands and much more.

Embryology. 66 pages on the embryo, fetus, ovum, and development of a baby.

The above list of contents is by the limitation of space just a mere summation. The actual content of *Gray's Anatomy* is so massive that the table of contents in the book needs 16 entire pages with 1,932 separate category entries. And the index of this masterwork covers 41 pages with 8,541 separate listings.

Again, as Dr. Crocco states, "There have been many imitations, there have been anatomical narratives, dissection manuals and

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Fig. 283—Surgical anatomy of the arteries of the neck, showing the carotid and subclavian arteries.

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Mr. Ricker speaks bluntly. For example, in a speech to a Washington, D. C., forum, he said: "The property and casualty business badly needs a reasonable profit. . . . Profits are essential to our system, and our system is the best in the world."

politics. A recently enjoyed book was John Toland's "Adolf Hitler."

Golf is another hobby—played as often as possible near the seashore, where the Rickers prefer to vacation. Nantucket does them fine, and so does Panama City, Fla. Mr. Ricker says he plays "terrible" golf and has a 25 handicap. "When you tee up, you don't want to be taut," he says. "Play relaxed. It's only a game."

As he draws that, you are reminded again that he is from Dixie.

"Mr. Ricker," he is asked, "what has happened since Jimmy Carter of Georgia took over in Washington? Are Southerners more welcome in corporate suites as they certainly are in the political centers of Washington?"

"Definitely," he says. "When I came up here from Memphis, I told every-

body I was from Memphis. Then, when Carter became President, I started saying: 'I'm from Augusta, Ga.' I found out that people took a lot more interest in me then."

Here, in an interview with a NATION'S BUSINESS editor, Mr. Ricker tells more about his business philosophy, the giant corporation he heads, and his personal life.

Mr. Ricker, Continental has paid cash dividends without interruption since 1853. Is this a record?

Not quite, but I believe it is the longest for any company on the New York Stock Exchange, where our stock has been listed since 1916.

We have also increased dividends 12 times since 1960. That's probably not a record either, but it is quite a perfor-

mance and backs up our opinion that we should be regarded as a growth-of-income stock. In recent years, the cash flow has been quite good. This has helped us benefit from increased income on our investments.

Continental has achieved your goal of having all divisions profitable. How did this come about?

Before I became chairman, I felt we were writing too much insurance. We were increasing our business as much as 20 percent a year or more. Then the insurance business turned sour, and a lot of other companies began throwing business out. We were picking up that business—which was something that carried no great honor, in my opinion.

Besides, we were writing types of insurance that are the worst to make profits on—workmen's compensation, general liability, and auto liability. Also, I could not see how we could service our customers properly if we were writing new business too fast.

So, on my first day as chairman, I said we were going to cut back to a reasonable level. I told our managers: "I take the responsibility. If anything goes wrong, I'll be the one with my neck out." Soon, we began to see our new business get down to a healthy rate.

It was a quick turnaround. Our 1977 business has been excellent and well-mixed.

Continental owns Diners Club, and it has been reported that you would like to sell it. Is that true?

At a meeting of stockholders last year, I was asked if I would like to sell Diners Club and our interest in Franklin Life. I said: "I will sell anything for the right price. Go find me someone who wants to buy. We'll talk price." That was just an expression—"I'll sell anything"—although it did turn out that we sold that Franklin Life stock.

Actually, we aren't particularly interested in selling Diners Club. It is doing fine now, after a poor period. The people who run Diners Club have done a good job, so don't give any credit to me. They are earning money. Their overseas affiliates are doing very well.

We have no plans to sell Diners Club, and no one has indicated a desire to buy. I'm not sure what the right price would be now. The value is going up every day.

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Yes, that's true. Originally, the card was an entertainment card—for travel, entertainment, and food. Use of the card has now broadened considerably.

I do like the word club. It gives a sense of exclusivity.

Surveys indicate that most people carry two credit cards. We like them to have ours as their second card. Abroad, Diners Club franchisees are local people who work hard. Diners Club in Japan makes five times its capitalization every year. The card is good for all sorts of things there, as well as in Hong Kong and Australia, to name a few places.

What does a credit card company have to do with an insurance company?

Both are in the financial services business.

Continental seems to go in heavily for IBM stock in its investment portfolio.

We sure do. I once was convinced that IBM would grow to be larger than Uncle Sam's government. It hasn't, obviously, but it is big, healthy, and profitable.

Quality common stocks represent about a third of our investment portfolio; the remainder is in bonds and preferred stocks. Our investment results traditionally have been excellent.

What shape is the insurance industry in these days?

Last year, there was general profitability after two losing years. Prospects for this year are excellent.

We have problems with the regulators in some states, however. Companies in regulated industries, such as ours, are apt to find that raising capital is going to be tough in the years ahead. The business must be profitable to attract capital, and some of the regulators are not permitting us to make the profits we need to grow and service our policyholders. I think this is coming to be realized, however, because we were permitted to increase rates recently.

The regulators should let insurance companies compete more freely. There are about 1,800 companies, so there is plenty of opportunity for competition.

Another complaint: Motorists with bad driving records who cannot get regular coverage go into what we call an assigned risk plan. Our industry was required by the 50 states to pay out \$600 million through the fund in 1976 and nearly \$900 million in 1977.

This is subsidization of certain drivers. We feel the public must decide if noninsurable drivers are to be covered. If they are, the tax mechanism should come into the situation because that's the only way the subsidy is going to be visible.

If society decides that these drivers should have coverage, do it outright—maybe like food stamps. At least in the food stamp program the government puts up the money—it doesn't ask the food companies to do it.

Should drivers with bad records be given licenses at all?

You have to ask how a person can get to work in areas where there is no public transportation. He needs to work, and I would hate to say he can't drive. This is a public policy question. But, in the insurance world, we don't feel we should subsidize these bad drivers.

Speaking of regulated companies, don't many of them want to be regulated?

This is true. Many do welcome regulation from the state capitals, and some would even like it from Washington.

I'm not against all regulation. In the insurance industry you need some regulation to help keep companies solvent. Without regulation, you could get some small companies putting out false advertising, trying to grab a lot of premiums, and then rushing off to Brazil or someplace else.

There has to be solvency regulation, but not for pricing. Let the insurance companies compete in pricing.

Your annual reports seem to be more candid than many others.

I'm happy you noticed. I believe that a company must communicate internally and externally. You must tell the good with the not-so-good and the bad. We certainly try to tell the whole truth, and we think our annual reports are the right place to do it.

One of our competitors told me recently: "My goodness, I'll have to hand it to you. You told everything in your annual report—what you were doing, how, why, and what you haven't done."

I was glad to hear it. I don't want people coming up to me and saying that we didn't tell this or that, that we were deficient in honest communication.

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INSURANCE 5,000 YEARS AGO

The insurance business is at least as old as recorded history.

There were bottomry contracts—a form of marine insurance—in Babylon 5,000 years ago. In these contracts, shipping merchants got loans from rich merchants and the loans were not repaid if shipments were lost at sea. Presumably, interest on the loans was at extra-high rates to compensate the lenders for the extra risk.

In ancient Rome, burial societies paid for funeral costs out of monthly dues paid by members.

Fire insurance also goes far back, but it did not get real impetus until after the Great Fire of London in 1666. Two British companies formed more than 250 years ago and still in business are the London Assurance Corp. and the Royal Exchange Assurance Corp.

Modern property, fire, and liability insurance are largely British inventions.

Lloyd's of London started in the early 17th century in a coffeehouse owned by Edward Lloyd, who gathered marine information along the docks and passed it on to his customers in the form of Lloyd's Lists. They are still being published. His customers were captains and shipowners, and other business people.

The first American insurance company was formed by Benjamin Franklin in 1752. It was known as the Philadelphia Contributionship. The first American life insurance firm was the Presbyterian Ministers' Fund, which began operations in 1759. The company is still in business in Philadelphia.

ly comprehensive medical program for its employees?

I like to think we do.

Every year, most of our people get a physical exam on the company. These exams have saved lives because trouble was spotted in early stages. Some young people who found out about medical problems are now cured and holding big jobs here. It is gratifying to meet and see them healthy and productive.

A couple of years ago, Continental put in a program to help mentally disturbed employees. We figured that ten percent of employees are mentally disturbed in one way or another from personal or domestic difficulties. The cause could be purely psychological or it could be alcohol or drugs. We want to help them.

Recently we started a program for cardiopulmonary resuscitation. If anyone in this building, and in our other offices around the country, has a heart attack, there will be an employee nearby who knows how to give relief until the ill person can be taken to a hospital.

A lot of people will die within a few minutes because they don't get resuscitation they need.

We have two employees on each of our 25 floors in this building who are trained by the Beekman Hospital. We had twice as many applicants for the training as we could handle. This adds

to esprit de corps. Our people know we care for them.

You seem to be a particularly contented man. Are you?

I'm pleased with my situation. I get pleasure out of many things. I enjoy life.

One of the nicest things about this job of mine is that I get around a lot. I visit with people. I enjoy travel, and I do much of it. When I was in marine insurance, I covered the world.

Traveling up the ladder to the top in Continental, going to annual meetings, being at board of directors' meetings—it has been work, but it has been fun too, and gratifying.

You must know a lot of people. Whose company do you value most?

My wife's. Everyone needs a critic. She is the most honest critic I have ever met. She really brings me into line, and I listen to her. She has something—a woman's intuition. I've told a lot of people about this.

Just bring a phoney around her, somebody from out of town. Take the phoney home for dinner. I'll say: "He was a great guy, wasn't he?"

My wife will answer: "Well, there was something about him. . . ."

Nine times out of ten, she's right. ☐



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Thomas Cook

Media wisdom from the mouth of Mr. Nautilus to the ears of William Esty.



(Ed Wolen, Co-owner, Nautilus Health Clubs in the Metropolitan Detroit area.)

"What, you may ask, does a muscular Adonis-type such as myself know about media buying?

"All I have to know is when it brings in more flabby thighs, more dropped derrieres and more muscles that can't cut the mustard, it's a good buy.

"When it does all that for very little money, it's a great buy.

"Three years ago, when we opened our first NFL-equipped exercise center, we didn't exactly have money to throw around. And the competition was rough.

"Today, we've got a chain of five successful centers, thanks in some small part to what we've learned about media.

"Of course, we have our usual media buy—radio, newspaper and TV Guide. But last year, for a special promotion, we wanted to add a little extra muscle to our schedule—and didn't want to spend big bucks doing it.

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pensive way to buy national upscale magazines in compatible local groups.

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"So there we were—full page—in Esquire, Playboy and Sports Illustrated.

"And now, we have so much cellulite on our hands, we don't know where to put it."

(If you want to find out more about Magazine Networks and how it can be used for—you should pardon the expression—heavy-ups, test marketing or special promotions, call Jim Hagan at (213) 478-2596.)

**There's a lesson to be learned
from a man who buys
media with his own money.**



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How to tell original prints from cheap reproductions.

Buying original prints is an excellent way for the novice to make a modest investment in beautiful works of art.

The buyer had better beware, however.

As more and more attention is being given to art as an investment, more and more dealers are trying to pass off cheap reproductions as fine art.



Joan Miro's original lithograph, *L'Enfance d'Ulysse*. Signed limited edition of 120.

At the Original Print Collectors Group, we sell only fine original works to a growing number of people who are enthusiastic about buying good art at moderate prices.

One of our primary concerns is to educate our customers, so that they'll be able to discriminate and get true value for their money.

A few pointers, then about original prints:

Original prints, whatever the process used to create them, are "hand-pulled" under the artist's supervision, or by the artist himself. This means that any work produced photographically or by another purely mechanical process is not an original print.

If you examine a print under a magnifying glass and discover a regular pattern of small dots, you will know immediately that it is not an original work.

If the print is a serigraph (produced by a silkscreen process), the ink will seem rather like paint and appear to be sitting upon (rather than absorbed into) the paper.

Etchings and engravings will produce a physical impression on the paper itself.



G. Clark Sealy's original etching, *Lotus Pond*. Signed limited edition of 125.

Contemporary original prints will always be signed in pencil by the artist himself, to indicate personal supervision and approval of the individual print.

Original prints are always produced in limited editions, at the most several hundred copies. If thousands of copies are available, then the work is almost certainly *not* original. (In most cases, to assure that the integrity of their work is

not violated, artists will destroy the plate after the edition has been produced.)

The print will have a figure on its border, indicating the number of prints pulled and the number of the individual print in the sequence.

For example, the figure 50/100 means that the edition has been limited to 100, and that this is the 50th print pulled.



Bernard Chazoy's original lithograph, *Paysage Bleu*. Signed limited edition of 175.

**Is the edition limited and is the print numbered?
Did the artist personally sign the individual work?**

There's a lot more to be learned about buying original prints, more than we can tell you on this page.

But if you'll send for our free color brochure, we'll be happy to tell you more, and show you the quality and variety of the prints we offer.

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The Man Who Shapes the Federal Budget

James McIntyre now heads an agency which he calls "sort of a heartbeat of the government." Here is a look at the man and his approach to his job

WHEN James Talmadge McIntyre, Jr., was appointed director of the Office of Management and Budget a few weeks ago, there was a lot of speculation about how he would operate.

A short, soft-spoken, low-key man, Mr. McIntyre had nothing like the stature in the Washington scene that his predecessor, Bert Lance, had enjoyed.

To Mr. McIntyre, however, there was no question of his being big enough for the job.

The 37-year-old lawyer from Georgia has a Texas-size confidence in his ability to oversee the management of the federal government's executive branch in the way that President Carter wants it overseen. He handled a similar job for Jimmy Carter on the state level when the President was governor of Georgia.

How will he run OMB?

"That's simple," he says with a grin. "I want to run the sharpest, brightest agency in town. And there is a tremendous amount of talent in OMB that can enable me to do it."

Congress is just now beginning to digest major handiwork of both the President and Mr. McIntyre—a federal budget bumping the half-trillion-dollar mark, the first budget wholly of the Carter administration's making.

It is also the first budget put together under the zero-base budgeting concept which the President—and Mr. McIntyre—hope ultimately will deliver to the public a balanced budget as well as more efficient government.

Mr. McIntyre, in quick, precise sentences, can inundate you with figures to support his contention that the hope will become reality.

He knows figures backward and forward, particularly the ones in this fiscal 1979 budget.

Unlike Lance

From the very beginning, the technical details of putting the budget together fell to Mr. McIntyre, who served as deputy director of OMB under Mr. Lance.

Mr. Lance, a rumpled bear of a man and the President's longtime and close

PHOTO: VONCH DEAMOTO



personal friend, was never viewed by very many as a personification of the detail-and-figure-conscious type associated with overseers of budgets.

"Bert was a marketer," says one close observer of OMB. "He was the guy who could sell the President's programs—zero-base budgeting, government reorganization, the big concepts."

"Jim McIntyre is the kind of guy you imagine handling the figures—the big, big figures of the government's budget."

Pushing zero-base

Mr. McIntyre doesn't pretend he has the same type of personality as Mr. Lance. But he is a lot more aggressive than most Washington pundits seem to think.

One thing he has done is to aggressively push the zero-base budgeting concept in the formulation of the new budget. In meeting after meeting with agency and department people, he preached zero-base with almost evangelical zeal.

"We got very good cooperation from

everybody," he says. "Also, we didn't try to be heavy-handed. We worked with everybody to make sure they understood what we were trying to do."

He was helped, he admits, by the fact that the President himself made it clear that use of the zero-base concept was Mr. Carter's idea.

"I think that was a very important factor in the success of this program," Mr. McIntyre says softly. He doesn't have to mention the clout of a President over the bureaucracy and that a linchpin of Mr. Carter's announced goals is government reorganization.

A native of Vidalia, Ga. (pop. 9,507), Mr. McIntyre got his law degree from the University of Georgia, practiced law in Athens, Ga., and was general counsel to the Georgia Municipal Association from July, 1966, to April, 1970, when he was appointed deputy state revenue commissioner.

Jimmy Carter named him head of the Georgia Office of Planning and Budget in October, 1972, and he was reappointed to that post by Gov. George Busbee in January, 1975.

He came to Washington to serve as deputy director of OMB, at President Carter's request, in March, 1977. The Senate confirmed him unanimously.

When Bert Lance resigned last autumn after stormy congressional controversy over some of his past personal financial practices, the President gave Mr. Lance's young colleague the title of acting director. In December, as the finishing touches were being put on the budget, the President made Mr. McIntyre's new status official by announcing he was going to send his name to Congress for confirmation as the director.

Drives pickup truck

An early riser, the new OMB director gets to work by 7:30, often driving himself to downtown Washington in a pickup truck from his mini-farm in Clifton, Va.

When he isn't working in the Old Executive Office Building on weekends, he and his family raise horses, and he builds things—such as a barn. His wife, Maureen, is a veterinarian,

A BUSINESSMAN TAKES OVER AT THE FED

Once, during a break at a meeting of corporate leaders, G. William Miller, chairman of Textron, Inc., told a reporter:

"Businessmen can meet any challenge thrown at them if given a chance."

Now the handsome 52-year-old businessman is bringing this attitude to the nation's central bank as chairman of the Federal Reserve Board.

The Sapulpa, Okla., native takes over at a time when there is continuing uncertainty over some of President Carter's economic policies—policies which many businessmen say are too vague.

Generally, businessmen who know Mr. Miller think the President made a sound—though surprising—decision in choosing a successor to the highly respected Dr. Arthur Burns. Mr. Miller himself says he won't turn his back on Burnsian policies.

Mr. Miller is a graduate of the Coast Guard Academy and was 31

when he joined Textron in Providence, R. I., from a New York City law firm. He was named president of the manufacturing company four years later, in 1960. He became chief executive officer in 1968 and chairman in 1974.

President Carter said he did not reappoint Dr. Burns because he believes that two terms as chairman are enough for any one person and that "you always need new blood."

Some strong supporters of Dr. Burns contend the President's real reason was too much independence on the part of the chairman.

No one who knows Mr. Miller expects he will be anything but an independent chairman. But, unlike Dr. Burns, he is a Democrat and has said he thinks he can work well with the administration.

Not widely known outside top corporate circles, Mr. Miller has spoken out a number of times about national economic matters. He has said, for

example, that low unemployment and price stability "are not impossible goals."

Mr. Miller is only the second executive of an industrial company to head the Fed. The other was Thomas McCabe, of Scott Paper Co., who served under President Truman, from 1948 to 1951.

The Federal Reserve has enormous influence over the nation's economy because of its control over monetary supplies. Many economists and bankers have been less than totally enthusiastic about the appointment to the chairmanship of a person who is neither an economist nor a banker.

But Dr. Milton Friedman, the Nobel Prize-winning, conservative economist, welcomes the appointment of a man with Mr. Miller's background.

When he heard the news, he quipped:

"Money is too important a matter to be left to bankers."



Top assistants to OMB Director James T. McIntyre meet regularly with him on the knotty problems of the budget and management responsibilities of the agency he wants to make the "sharpest in town."

but doesn't practice. They have three daughters.

In Washington, a city of many words but few physical actions, there is a certain aura about anyone who builds a barn himself.

OMB, too, has a certain aura, since its director is something of a general manager for government. Management supervision of agencies and departments is being emphasized more and more by the agency.

Government's heartbeat

"We are sort of a heartbeat of the government," Mr. McIntyre says. "We keep things going on a day-to-day basis on behalf of the President."

Before the President named Jim McIntyre as OMB director, there were many who thought Mr. Carter would try to get a "name" from the world of business or finance for the job.

"My betting was on Jim from the very start after Bert left," says one former Georgia state official. "You know, some Presidents don't like to talk figures and details. But Carter does. He's his own budget director in many ways. He is familiar with the details, and he liked the way Jim McIntyre did things in Georgia. He also likes the way Jim does things in Washington."

Among the things that Mr. McIntyre will try to do as OMB director is keep a

lid on the growth of government and the federal budget.

He knows he isn't running the 100-yard dash.

Rome wasn't built in a day

"Government reorganization isn't going to happen in one day," he says. "It will take several years. But we have made progress already. Plans have gone to Congress for reorganizing the United States Information Agency and the State Department's cultural affairs section. Many agencies have already done some reorganization on their own, and more is coming."

There is another whopping deficit in the new budget, and whether the dream of a balanced budget can be attained by 1981, as the President wants, depends a great deal upon the economy—and upon Congress's own spending ideas.

It also depends a great deal on the administration.

Economic manifesto

Mr. McIntyre says the economic philosophy which went into preparing the new budget and will go into future Carter budgets can be spelled out this way:

- "We should not allow the percentage of the gross national product accounted for by public spending to exceed 21 percent in the long run.

- "We should not allow federal income taxes to take an ever-increasing share of the incomes of individual taxpayers. We should cut taxes as inflation automatically increases that share.

- "We must not allow the budget deficit to become a permanent feature on the economic landscape.

- "We should move boldly to develop genuine private sector jobs—jobs with a future—for the thousands of minority and teenage workers now unemployed in our great cities."

Getting acquainted

Mr. McIntyre has been working hard to become as good a salesman for the President's programs as he is a technician.

He has been addressing business groups around the country and getting acquainted with key congressmen by calling on them.

It was no secret after Mr. Lance left that Jim McIntyre wanted the job of director. Nor was it a secret that he didn't mount any great campaign for the job, even though he was a veteran member of the Carter team and had powerful friends deep within the inner sanctum.

However, as acting director for four months, he acted like the director. Which, it turned out, suited the President just fine. □

The Ultimate Tax Shelter



by
TED NICHOLAS

Tax experts are now referring to a small, privately owned corporation as "The Ultimate Tax Shelter." This is especially true since the passage of the Tax Reform Act of 1976. This law makes most former tax shelters either obsolete, or of little advantage. Investments affected include real estate, oil and gas drilling, cattle feeding, movies, etc. These former tax shelters have lost their attractiveness. Aside from that, these tax shelters required a large investment. Only a small segment of the population could benefit from them.

I've written two books showing how you can form your own corporation. The first is for business and "not-for-profit" corporations, and the second for professional corporations. I've taken all the mystery out of it. Thousands of people have already used the system for incorporation described in the book. I'll describe how you may obtain either without risk and with a valuable free bonus.

A corporation can be formed by anyone at surprisingly low cost. And the government encourages people to incorporate, which is a little known fact. The government has recognized the important role of small business in our country. Through favorable legislation incorporating a small business, hobby, or sideline is perfectly legal and ethical. There are numerous tax laws favorable to corporate owners. Some of them are remarkable in this age of ever-increasing taxation. Everyone of us needs all the tax shelter we can get!

Here are just a few of the advantages of having my book on incorporating. You can limit your personal liability. All that is at stake is the money you have invested. This amount can be zero to a few hundred or even a few thousand dollars. Your home, furniture, car, savings, or other possessions are not at risk. You can raise capital and still keep control of your business. You can put aside up to 25% of your income tax free. If you desire, you may wish to set up a non-profit corporation or operate a corporation anonymously. You will save from \$300 to \$1,000 simply by using the handy tear-out forms included in the book. All the things you need: certificate of incorporation, minutes, by-laws, etc., including complete instructions.

There are still other advantages. Your own corporation enables you to more easily maintain continuity and facilitate transfer of ownership. Tax free fringe benefits can be arranged. You can set up your health and life insurance and other programs for you and your family wherein they are tax deductible. Another

very important option available to you through incorporation is a medical reimbursement plan (MRP). Under an MRP, all medical, dental, pharmaceutical expenses for you and your family can become tax deductible to the corporation. An unincorporated person must exclude the first 3% of family's medical expenses from a personal tax return. For an individual earning \$20,000 the first \$600 are not deductible.

Retirement plans, and pension and profit-sharing arrangements can be set up for you with far greater benefits than those available to self-employed individuals.

A word of caution. Incorporating may not be for you right now. However, my book will help you decide whether or not a corporation is for you now or in the future. I review all the advantages and disadvantages in depth. This choice is yours after learning all the options. If you do decide to incorporate, it can be done by mail quickly and within 48 hours. You never have to leave the privacy of your home.

I'll also reveal to you some startling facts. Why lawyers often charge substantial fees for incorporating when often they prefer not to, and why two-thirds of the New York and American Stock Exchange companies incorporate in Delaware.

You may wonder how others have successfully used the book. Not only a small unincorporated business, but enjoyable hobbies, part time businesses, and even existing jobs have been set up as full fledged corporations. You don't have to have a big business going to benefit. In fact, not many people realize some very important facts. There are 30,000 new businesses formed in the U.S. each and every month. 98% of them are small businesses; often just one individual working from home.

To gain all the advantages of incorporating, it doesn't matter where you live, your age, race, or sex. All that counts is your ideas. If you are looking for some new ideas, I believe my book will stimulate you in that area. I do know many small businessmen, housewives, hobbyists, engineers, and lawyers who have acted on the suggestions in my book. A woman who was my former secretary is incorporated. She is now grossing over \$30,000 working from her home by providing a secretarial service to me and other local businesses. She works her own hours and has all the corporate advantages.

I briefly mentioned that you can start with no capital whatsoever. I know it

can be done, since I have formed 18 companies of my own, and I began each one of them with nothing. Beginning at age 22, I incorporated my first company which was a candy manufacturing concern. Without credit or experience, I raised \$96,000. From that starting point grew a chain of 30 stores. I'm proud of the fact that at age 29 I was selected by a group of businessmen as one of the outstanding businessmen in the nation. As a result of this award, I received an invitation to personally meet with the President of the United States.

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The New Business Boom—Employee Fitness

By Jack Martin



Employees of Sentry Life Insurance Co., in Stevens Point, Wis., get an orientation lecture before beginning a physical fitness program. Hundreds of companies are now providing such programs for workers and executives.

THE TOUGH union negotiator took a long look at the proposed health insurance package that his company counterpart—with a wince at its cost—had just laid on the table.

"Forget that," the union man said. "What kind of physical fitness facilities can you provide?"

That's a hypothetical situation, but it just might occur someday soon if a current trend continues. That trend is for more American businesses to finance fitness programs for their employees and for more employees to use them.

Such programs can be important factors in employee attitudes toward employers. Says Janet Redick, an auditor

at Northern Natural Gas Co., Omaha:

"I had an offer of another job, but one of the things that swayed me to Northern was the fitness center, which I had heard about." She uses the center three times a week.

Good for business

From the business point of view, encouraging fitness is more than a matter of corporate altruism, says Darwin E. Smith, chairman and chief executive officer of Kimberly-Clark Corp., Neenah, Wis., which has just put more than \$2 million into a fitness program.

"Kimberly-Clark has a substantial investment in its employees," he says. "To us, it is simply good business sense

to keep them feeling well, which not only keeps them on the job but even helps them do a better job. If our program is successful, we can look forward to increased productivity.

"Also, we may have found a partial solution to the continually mounting costs of direct medical care. As you know, these costs have become a major expense for every company which pays for medical and hospitalization insurance."

More awareness

Kimberly-Clark and Northern Natural Gas are just two members of a growing health club, says W. Brent Arnold, of Xerox Corp., who is president

of the American Association of Fitness Directors in Business and Industry.

"There is more health awareness now," he says. "In the past year interest in this field has been unbelievable. The association gets 20 or so letters a week from firms asking how to start fitness programs, what kind of equipment to get, and so forth."

This interest is reflected in the growth of the fitness directors group itself. Organized in 1974, it drew 55 delegates to its first convention the following year. There are more than 300 members now.

The employee fitness movement may be traced to 1894, when John H. Patterson, president of the National Cash Register Co. in Dayton, Ohio, introduced morning and afternoon exercise breaks for his workers. In 1904 he installed a gym on the fourth floor and in 1911 opened a 325-acre park for employees.

Economics favor fitness

But such efforts were rather infrequent until about a decade ago, when fitness programs really started to grow. They are still growing. Economics indicate why.

An estimated \$25 billion is lost each year by American business due to premature death of employees, and \$3 billion is lost due to illness, according to Brent Arnold. Heart attacks alone cost industry thousands of workdays a year, adds Mr. Arnold, who is manager of physical fitness and recreation for Xerox at its International Center for Training and Management Development in Leesburg, Va.

There aren't many hard statistical studies yet to support the concept of fitness programs—the association is working on some now. But studies that have been done support the surface logic of the movement: Healthier employees are more productive employees.

A survey at the Occidental Life Insurance Co. of California shows that regular users of the company gym are

absent only half as often as nonusers, says Bob Rush, the manager of group sales, who supervises the fitness program.

Fewer days lost

At Northern Natural Gas, "significantly fewer days are lost due to illness by those in our aerobic program than by those not in the program," says Jerome F. Cristina, director of Northern's fitness center. (Aerobic refers to activities, such as jogging, which increase oxygen utilization and work capacity.)

Company fitness programs range from those costing millions down to modest efforts in which a YMCA or church gymnasium is used, rather than in-company facilities.

In Chicago, employees of Bankers Life & Casualty Co. started an after-work session at a community center gym across the street from the firm, for example.

One of the more impressive operations is that at Kimberly-Clark. It was designed not just for the exercise needs of the employee, but for the employee's total health picture, explains Chairman Smith.

"By conventional standards, we had a good health program," he says. "The only trouble was that it placed major emphasis on direct medical care—which occurs after an employee has become ill. We began to ask ourselves whether a different approach to health care might prevent or minimize illness."

Health testing center

The result of that thinking is a \$2.5 million complex, including a 7,000-square-foot multiphasic health testing facility and a 32,000-square-foot physical fitness facility, for 2,100 of Kimberly-Clark's employees in the Neenah area. The center was dedicated last October.

It is staffed by 15 full-time health care personnel, including Medical Affairs Vice President Robert E. Ded-



A banked indoor track is available for employees of Kimberly-Clark Corp.

mon, M. D., a specialist in internal medicine; Bruce J. Olson, manager of health services, who has a master's degree in exercise physiology; plus nurses and technical personnel.

The idea is to get employees to adopt healthy life-styles, not just exercise, so workers are given a complete health check with individual counseling. The company pays for everything.

Head-to-toe screening

Upon signing up, the employee fills out a 40-page medical history, which is analyzed by computer. The computer compares his health status with actuarial standards for people of the same sex and age. Next, the worker goes

through multiphasic screening—there are chest X rays, electrocardiograms, and urinalyses. Also, there are check-ups on hemoglobin, blood sugar, cholesterol and triglycerides, liver function, lung function, skin fold thickness and body density (to determine percentage of body fat), hearing, vision, and blood pressure.

After further physical examination

"We have screened about 500," he says. "The employees are very enthusiastic about it; we had a target of 50 percent employee participation, but we have already exceeded that. We have picked up some unsuspected medical problems, too."

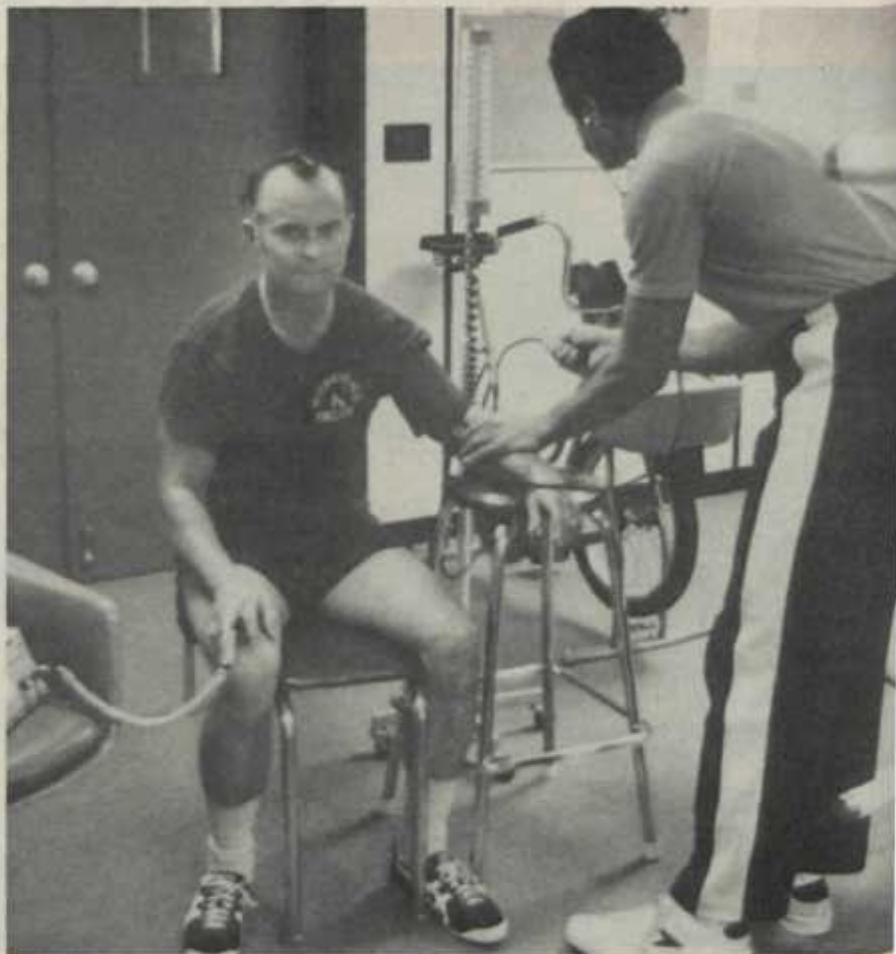
Dr. Dedmon looks on these preventive medicine moves as the way of the future, not only because of rapidly ris-

theme song of the television show, "Happy Days," in her aerobic dancing class after work, three afternoons a week.

"I have a tremendously enjoyable time," says technical librarian Mary E. Sutliff, 32. "And, combined with a diet they gave me, the exercise has helped me to lose 25 pounds since I've been in the program." Her class is learning



Another way that Kimberly-Clark workers build stamina and strengthen heart and lungs is to exercise on the familiar stationary cycle.



Don Iburg, a vice president of Omaha's Northern Natural Gas Co. and a jogger, has his blood pressure and heartbeat rate checked by the company's fitness testing director, Roy Hunter, as part of a company program.

there is a treadmill test to evaluate heart action during exercise. Then the employee has a health evaluation review with a staff member and gets a "health prescription."

The prescription, prepared with the approval of the employee's personal physician, may call for jogging, swimming, walking, or cycling, or another activity more to the worker's liking—such as aerobic dancing. It also may recommend counseling or attendance at after-work seminars on such subjects as obesity, nutrition, alcohol and drug abuse, and stress.

More than 1,200 employees signed up for the program in its first month, Dr. Dedmon reports.

ing medical care costs, but also because "it is becoming more and more apparent that medicine and technology alone cannot adequately prevent or treat the major diseases of modern society—cancer, heart trouble, and stroke. Instead, we have to recognize that how we live can determine how long we live."

He adds: "The health management program is aimed at changing ingrained habits that are detrimental to mental or physical well-being."

Helps with weight loss

For one employee, the Kimberly-Clark program literally means happy days. That's because she dances to the

new eating habits, "so I know I won't be able to go back to eating sweet rolls. I tried in the past to lose weight, but I guess I just needed that extra incentive of something like the center."

Harry L. Spiegelberg, director of research and development in Kimberly-Clark's feminine care products division, exercised on his own before, but he also welcomes the center. "The facilities include an inside running track—which means an awful lot in view of the Wisconsin winters," he says.

"Also, I get some guidance on what kind of exercising I should be doing; before, I was just on my own."

Why does he exercise? "I have found

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that, if I am physically fit, my mental processes seem to function a lot better. Most of those in my office agree—we all are involved in some sort of decision-making, and good physical condition helps."

Improves strength

At Northern Natural Gas, auditor Janet Redick heads for the fitness center at 4:30 three afternoons a week. She has been doing it for more than two years and has trimmed her waist and hips while markedly increasing her strength.

"I feel like a different person," she says. "I'm doing things I never did before. Here's one example: It may not be much, I guess, but I can open a jar that I never could open before, and it's no trouble now. Recently I was helping with the refreshments at a marathon run, and I could easily lift cartons of canned fruit juice. A woman working with me couldn't budge them." Ms. Redick, 27, started out on a walking program, then moved to the stationary bicycle.

Another employee, Boyce Lange, 41, has a very serious motivation for keeping fit—he had a coronary bypass operation a couple of years ago, before he came to work for Northern as a systems analyst.

"I started going to the fitness center and tried to stick to it, but I slacked off," he says. "Then the director, Jerry Cristina, called me in, commented on my irregularity, and asked if I would mind if he kind of hounded me. I said to go ahead, so he got me back on a regular program on the stationary bicycle and on a diet. Last year at this time I weighed 211 and my blood pressure was about 120 over 85. Last week I weighed 171 and my blood pressure was 112 over 68. I feel so much better; there's all the difference in the world. So I'm very enthusiastic about this program and grateful to Jerry for his help."

Voluntary participation

The success of the foregoing cases illustrates two factors vital to the success of any company fitness program, say Bruce Olson, of Kimberly-Clark, and Brent Arnold, of the fitness directors association.

"You must have qualified, enthusiastic people running the program," Mr. Olson says. "And the employee must be ready to take some responsibility for his health and come into the program on his own. You can't mandate participation."

It also helps if company executives provide leadership.

Kimberly-Clark's Dr. Dedmon notes that the company's chairman, Darwin Smith, takes part in its fitness program. "That creates a good atmosphere," Dr. Dedmon says.

Mr. Smith is a jogger, and so is Dr. Dedmon—"I hadn't been, but I am now."

At Northern Natural Gas, President Sam Segnar is a jogger, as is Don Iburg, vice president of the wholesale natural gas division.

How to start a program

How do you get a fitness program started at your own company?

Information can be obtained from the American Association of Fitness Directors in Business and Industry, in care of The President's Council on Physical Fitness and Sports, Washington, D. C. 20201.

In summary, says AAFDBI President Arnold, the first step is to make sure all employees, and especially top managers, are educated in the value of physical fitness.

"Without this preliminary work, your physical fitness program will not get off the ground," he says.

Mr. Arnold adds that the selling material can cover the risk factors associated with poor fitness; preventive medicine aspects of fitness, such as increased heart and lung capacity and lowered blood pressure; and the obvious links between fit employees and better productivity, less absenteeism, and improved morale.

The morale part can count for quite a bit, not only for the worker as an individual, but for the company, too, says Jerry Cristina, of Northern Natural Gas.

"Many employees tell me they wouldn't know what they would do if they couldn't come down and work off pressure," he explains. "And you know, people who work out seem to be more relaxed and gracious in their dealings with others—I don't know why, but they do."

"There is another factor, too: At our fitness center, people from supply get to know people from accounting, and so forth, so it gives them a feeling of camaraderie and personalizes their work relationships. This has to be helpful in interdepartmental communication, so it has to be helpful to the company." □



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Where the Public Stands on Union Power Grab

By Robert T. Gray

A new poll shows little public support for proposed legislation to make union organizing easier. More than that, it shows that only a minority of union members like the proposal

SENATORS opposing labor law changes designed to buttress union organizing drives have a major new weapon as the showdown battle begins over the legislation.

The important new element in the debate is a poll that counters AFL-CIO claims of strong support for the legislation among the public at large and among rank-and-file union members.

The AFL-CIO, which has encountered stiffening resistance to union recruiting drives in recent years, has moved to resolve its problems through sweeping changes in the National Labor Relations Act.

The public's view

Union leaders have made passage of a number of amendments their top legislative priority, and they have been conducting a massive grass-roots campaign for the amendments throughout the country.

OTHER CAPITOL HILL ACTION TO WATCH

Labor law revision was just one of the major issues of concern to business before the 95th Congress as it began its second session. Other top concerns:

ENERGY

Natural gas pricing remained the major bottleneck as Senate and House conferees continued efforts to resolve major differences in the energy legislation passed by the two chambers.

Basic questions are whether to continue federal price controls on new natural gas supplies entering interstate pipelines, at what levels prices should be set if controls are retained, and whether the controls should be extended from interstate supplies to gas produced and sold within the same state.

Conferees have reached agreement thus far on a wide range of conservation measures and on a plan to require some electric utilities and major industrial plants to burn coal instead of oil or natural gas in their boilers.

Still ahead, however, are the hotly controversial tax features of the energy legislation originally submitted to

Congress by President Carter last April. The taxes would be designed to discourage consumption. Business spokesmen say that abolition of price controls on gas and other energy, along with incentives toward increasing supplies, would go much further in easing national energy problems than taxes aimed at curbing consumption.

ECONOMIC POLICY

President Carter's recommendations in the crucial areas of taxes, spending, and overall economic policy are only the starting points for extensive debate in Congress.

There are already strong pressures for tax cuts in excess of the \$25 billion recommended by the President, and there is debate over how the total cut should be divided among individuals and business.

While some tax reductions are considered a foregone conclusion, how to go about it provokes much controversy.

Although the President has pretty well abandoned his initial plan to seek far-ranging changes in basic tax law this year, he is still seeking some changes in a few areas.

Some members of Congress are

demanding that reductions be accompanied by revisions which they claim are needed to make the tax laws more equitable. Most of the proposed changes are aimed at abolishing or limiting tax preferences for business activity.

On the spending side of the federal fiscal picture, the big question is whether the first budget for which President Carter is fully responsible will also be the first in the nation's history to reach or surpass the \$500 billion level.

Congressional action on the budget will provide the final answer.

On overall economic policy, the main questions to be answered involve the manner in which the President intends to redeem his pledge to reduce unemployment in the face of renewed threats of inflation. Key members of his administration have been trying to reassure the business community that the President will rely heavily on encouraging the private sector to help solve unemployment problems, without pumping up inflationary pressures.

At the same time, however, the administration has swung its support behind the revived Humphrey-Haw-

But, as Congress returned to Washington to take up the unions' labor revision bill, among other major issues, the Opinion Research Corp. reported findings of a survey it had conducted among a cross section of the American electorate. According to ORC, the poll shows that:

"Very little support (22 percent) exists among members of the general public for the passage of federal legislation that would make it easier than it now is for unions to organize non-union employees. As a matter of fact, as many people (25 percent) believe that there should be legislation that would make organizing nonunion employees more difficult than at present. . . .

"The lack of support for legislation that would simplify union organizing efforts is evident, not only in all parts of the country, but also among people of all political persuasions—Democrats

as well as Republicans and independents. . . .

"In fact, the proposal to make it easier for unions to organize does not win majority support from current union members. Only one third (33 percent) support the idea, while almost half (48 percent) think that the present laws should not be changed.

"As it is, the majority of Americans think that the power and political influence of organized labor already is too great.

"Most people (63 percent) think there is too much power concentrated in the hands of labor leaders of big unions in this country. This is the attitude of majorities of people in all major political subgroups and among liberals as well as conservatives. Even union members tend to feel this way."

The ORC poll was commissioned by the Chamber of Commerce of the United States, which has been in the fore-

front of business organizations opposing passage of the union-drafted legislation, which has White House support.

Basically, business views the legislation as a labor-sponsored move to overhaul the underlying philosophy of the National Labor Relations Act. Since its passage 43 years ago, that act has been oriented toward mediating disputes between management and labor.

However, business believes organized labor now wants to convert the law into an instrument of punishment against employers who resist organizing efforts.

What labor wants

Key features of the proposed amendments would, from the business standpoint:

- Provide for quickie elections on union representation, denying both employer and employee sufficient op-

kins legislation with its underlying premise of heavy federal outlays to bring the unemployment rate down.

The extent to which the Carter administration relies on the federal treasury, as opposed to the private sector, to improve the economy will go a long way toward deciding whether the President can gain the business community's confidence that he has been strenuously seeking.

REGULATION

Consumer advocate Ralph Nader is mounting a new drive to win congressional approval of legislation to add a consumer protection agency to the many other governmental offices now charged with consumer-protection responsibilities.

The move to create the agency has run head-on into growing public opposition to further expansion of the regulatory bureaucracy, which more and more people view as a costly operation that often causes more problems than it solves.

In another key regulatory area, Congress and the business community are awaiting a Supreme Court decision in a landmark case that could have an important impact on the future of the Occupational Safety and Health Act. The case, *Marshall v. Barlow's, Inc.*, raises the question of

whether constitutional protections against unreasonable searches apply to OSHA inspections of business locations.

A three-judge federal district court panel ruled in December, 1976, that F. G. Barlow, a plumbing and heating contractor in Pocatello, Idaho, was within his rights in refusing OSHA inspectors entrance to his business because they did not have a search warrant. The court held that inspection provisions of the safety act were unconstitutional under the Fourth Amendment requirement for search warrants.

The Supreme Court decision could, depending on its wording and scope, apply to inspection and enforcement activities of all government agencies. Thus it could be one of the most important court decisions ever in the field of government regulation.

SOCIAL PROGRAMS

President Carter's recommendations for welfare reform and national health insurance will be subjects of major controversy in the social field during the second session of the 95th Congress.

The President has already submitted his welfare program, and it is in deep trouble in Congress. Among the more controversial aspects of the

plan are its cost; its reliance on government jobs to move people from welfare to work; its guaranteed-income concept, which includes adding working individuals to welfare rolls; and the extent to which it would expand the welfare system. Many months of debate lie ahead, and prospects are that the Carter plan will be changed drastically if any final legislation is enacted. The President has promised to submit a detailed program for national health insurance to this session of Congress, but there has been extensive controversy within his administration over how far he should go.

Some top advisers have been telling the President that any recommendation for increased payroll taxes to finance a broad medical-care system would get nowhere in a Congress that has just voted a massive increase in payroll taxes to shore up the Social Security system. Other advisers are telling Mr. Carter that the public is sufficiently alarmed about rising costs of medical care to support a national plan.

Business intends to keep pointing out that government intervention in the health field has been a major cause of increased medical and hospital costs and cannot possibly be the answer to national needs.



Business opposition to union-sponsored proposals for amending national labor law was detailed to a Senate subcommittee recently by a delegation from the Chamber of Commerce of the United States. Testifying were Dr. Richard L. Lesher (center), National Chamber president, and attorneys Robert T. Thompson and Vincent J. Apruzzese, of the National Chamber's Labor Relations Committee.

portunity to study the issues and raise legitimate challenges.

- Pack the National Labor Relations Board by increasing its membership from five to seven, with the two additional appointees expected to be pro-labor.

- Require employers to help finance union organization drives. If employers communicated with employees about the union-representation question on plant premises or during working hours, union organizers would have to be given similar opportunity to communicate their viewpoints.

One result would be to discourage employers from trying to get their views to workers, meaning that employees would vote on organization after hearing only the union viewpoint.

- Allow NLRB to impose wage and benefit increases if the board determines that an employer has refused to bargain in good faith on an initial contract. The terms imposed by NLRB would be in effect until a collective bargaining agreement was reached and would be patterned on those in effect throughout an industry. Thus, a smaller employer could be forced to meet terms of wages and benefits being paid in major industrial plants.

- Authorize NLRB to bar an employer from doing any business with

the federal government for up to three years if the agency determines the employer has willfully violated the labor laws.

That penalty would apply to the entire company, even if the alleged violation occurred only at a single plant. No provision would be made for workers who lost their jobs because the company had been prohibited from receiving government contracts.

- Permit the board to order a company to pay double back-wages to workers who successfully contended that they had been discharged for union activities. The board would be required to seek injunctions to require employers to reinstate such workers.

- Impose other new rules and procedures that would lead to sharply increased litigation in the already-backlogged federal courts. The end result would be increased delays and legal expenses in resolving labor-management cases.

What Meany says

Union leaders say the proposed amendments are intended only to make the National Labor Relations Act work the way it was intended. George Meany, president of the AFL-CIO, told a congressional hearing on the labor law revisions:

"The theory of the law was that

NLRB-conducted elections would be promptly held and, where the vote was for the union, employers would accept the majority decision of their employees. But anti-union employers quickly learned that an election tomorrow is better than an election today; that an order to bargain tomorrow is better than bargaining today; that, in fighting the union, delay is their greatest ally, second only to economic coercion."

Impact on business

But business leaders point out that union demands for major amendments in the National Labor Relations Act come at the same time that the percentage of organized workers in the national work force is declining.

Robert T. Thompson, chairman of the National Chamber's Labor Relations Committee, says the union-written amendments to national labor law "would put the full power of the government behind union organizers. These proposed revisions would let labor push unions down the throats of nonunion employees."

He predicts that if the amendments are enacted, union membership would double over the next five years and triple by 1988, with a resultant increase in organized labor's political power.

The impact of the legislation would be doubly harsh on small businesses, Mr. Thompson says, because "they are the ones who are least prepared to resist the combination of labor and government coming at them at the same time."

Mr. Thompson, one of the nation's leading labor lawyers, spoke at a news conference at which the National Chamber announced the results of the ORC survey.

Will of the people

While the labor law amendments have passed the House, business is relying on the poll findings to have an important bearing on Senate consideration of the measure, which could come this month.

Dr. Richard L. Lesher, National Chamber president, told the news conference that "our hope is that the will of the people will be heard and will be honored."

Among the other findings of the survey:

Sixty percent of all those polled think that labor unions have more power than employers, while only 14 percent believe that the reverse is

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true, and 24 percent believe that the two are equally powerful.

Fifty-one percent believe labor unions have grown too powerful and should be curbed, while only 18 percent see a need for more union power.

Forty-five percent think employers and unions are equally fair in dealing with employees; 25 percent say labor unions deal more fairly with them; 20 percent say employers are more fair.

Fifty-one percent believe that union leaders represent the public interest poorly or very poorly—with the comments almost evenly divided between the two categories—and 56 percent say that labor unions are too involved in political action.

Fifty-one percent say organized labor has too much influence on Congress, and 54 percent say the political pronouncements of union leaders usually represent only their own views.

Only five percent feel that those pronouncements represent the views of union members.

Sixty-three percent say that union leaders now have too much power.

Only 22 percent say they think a federal law should be passed to make it easier for unions to organize, 25 percent say it should be made more difficult, and 40 percent say the present law should not be changed.

Favor secret ballots only

The poll also spotlights some public attitudes on how union activities should be conducted.

It shows that:

Seventy-seven percent of the general public believe that elections on union representation of employees should be determined by secret ballot only; 81 percent favor a secret ballot of rank-and-file members on whether a strike

should be called; 83 percent say those members should also decide by secret ballot whether to continue a strike that has gone on for 30 days.

Seventy-two percent favor right-to-work laws that allow individuals to get and keep a job without having to join a union.

Fifty-four percent favor a law to prohibit the spending of union dues for political purposes.

The ORC survey produced several highly interesting findings on the attitudes of rank-and-file union members regarding labor leaders, labor activity, and labor legislation.

Slightly more than half of the union members polled, for example, feel that too much power is concentrated in the hands of the leaders of big labor unions.

Other viewpoints of union members revealed by the survey:



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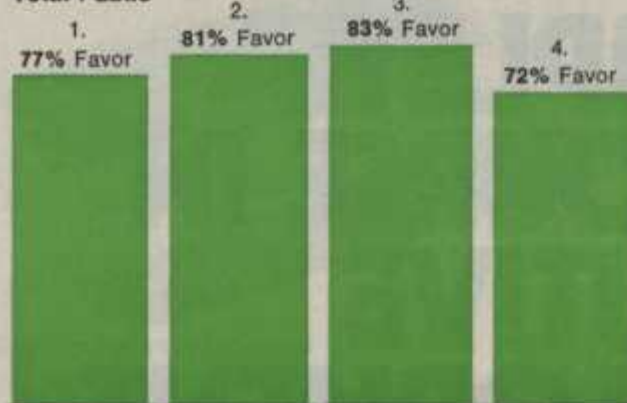
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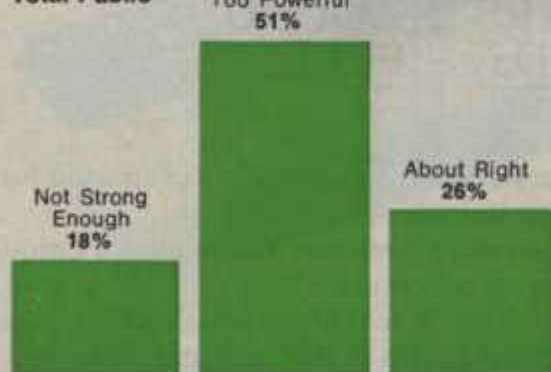


Total Public



1. A law that requires a secret ballot is the only way to determine whether or not nonunion employees want union representation.
2. A law that requires worker approval by secret ballot before a strike can be called.
3. Take the case of a strike that is not settled after thirty days. Do you favor or oppose a law requiring a secret ballot to find out if workers want to stay out on strike or go back to work?
4. A law that allows a person to get and keep a job without joining a union.

Total Public



Please tell me which one of these statements best describes the way you feel about labor unions in this country —

1. Labor unions today are *not strong enough*, I would like to see them grow in power.
2. Labor unions today have *grown too powerful*, I would like to see their power reduced.
3. The power the labor unions have today is *about right*, I would like to see it stay the way it is.

Total Public



Do you think federal legislation should be passed that makes it easier than it now is for unions to organize nonunion employees, that makes it harder than it now is for unions to organize nonunion employees, or should the current laws not be changed?

An Opinion Research Corp. poll commissioned by the Chamber of Commerce of the United States shows how the public responded to questions concerning the proposed changes in the nation's labor law.

Only 34 percent agree that today's labor unions are not strong enough and should have more power.

Forty-five percent believe that both employers and unions treat employees equally fairly.

Only 16 percent think union leaders represent their members' interests very well; 43 percent say fairly well; 40 percent say those leaders represent workers' interests fairly poorly or very poorly.

Only ten percent of union members feel that union leaders represent the interests of the general public very well; 45 percent say fairly well.

A surprisingly large 43 percent of the union members say labor unions are too much involved now in political action; 27 percent say the present level

of involvement is just about right; only 26 percent say the unions are not involved enough.

A strong majority of union members say they favor a secret ballot to decide questions of union representation and launching and continuing strikes. Union members favor, 50 to 46 percent, laws that allow individuals to obtain and keep jobs without having to join a union. The public divides 72 to 23 percent on that issue.

On the pending legislation to make it easier for unions to organize, not only do 48 percent of union members say no changes are needed in present law while only 33 percent favor passage of such a bill, but 12 percent endorse the idea of legislation to make union organizing less easy.

The National Chamber's Dr. Leshner and Mr. Thompson summed up the ORC poll in this joint statement:

"The survey findings clearly demonstrate there is absolutely no mandate from the public to change our labor laws so that it will be easier for unions to organize new members. The mandate is from the other direction.

"It comes from an overwhelming number of Americans who believe their rights should be strengthened in relation to union control over their affairs. They want secret ballots in union affairs and the right to gain or keep a job without regard to whether they belong to a union."



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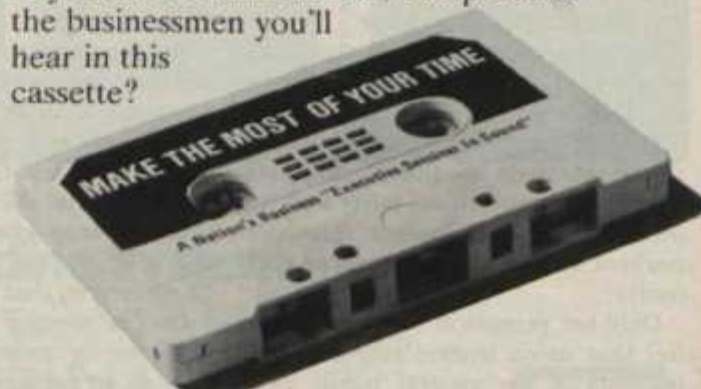
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How to Stop Time-Waste on the Job

By O. Mark Marcussen

For all businesses, wasted working hours add up to a \$300 billion yearly loss. Here are some steps that could yield big dividends for you

AERICAN BUSINESSES waste more than \$300 billion each year through poor work force management.

If this statement is startling, consider the following:

The work force today totals more than 90 million. The average annual income of each worker is more than \$12,000, extra benefits included. Therefore, this work force represents a total annual payroll of more than \$1 trillion.

Studies have found that, on the average, only 4.4 hours out of eight working hours per employee are used productively. Another 1.2 hours are

lost because of personal and other unavoidable delays, and 2.4 hours are wasted as a result of poor work force management.

Why productivity is lost

Since the waste totals about 30 percent of total work time, it is at least a \$300 billion problem for business.

Poor management is caused by a central management problem. Front-line managers are notoriously unprepared for the responsibility of utilizing human resources. Selected on the basis of technical skills, untrained in management techniques, and unchecked by

quantitative measures, they are victims and perpetrators of that \$300 billion waste.

Typically, a first-level supervisor has only a general idea of the priority of each task, how long it should take to complete it, and what the checkpoints are. Thus he can, and will, set his own pace as long as it is not unreasonable. His poor scheduling accounts for 35 percent of the productivity loss.

In addition, when front-line managers assign tasks with vague instructions, the average employee does not know what is expected and how the work should be done. Imprecise assignment accounts for another 25 percent of the loss.

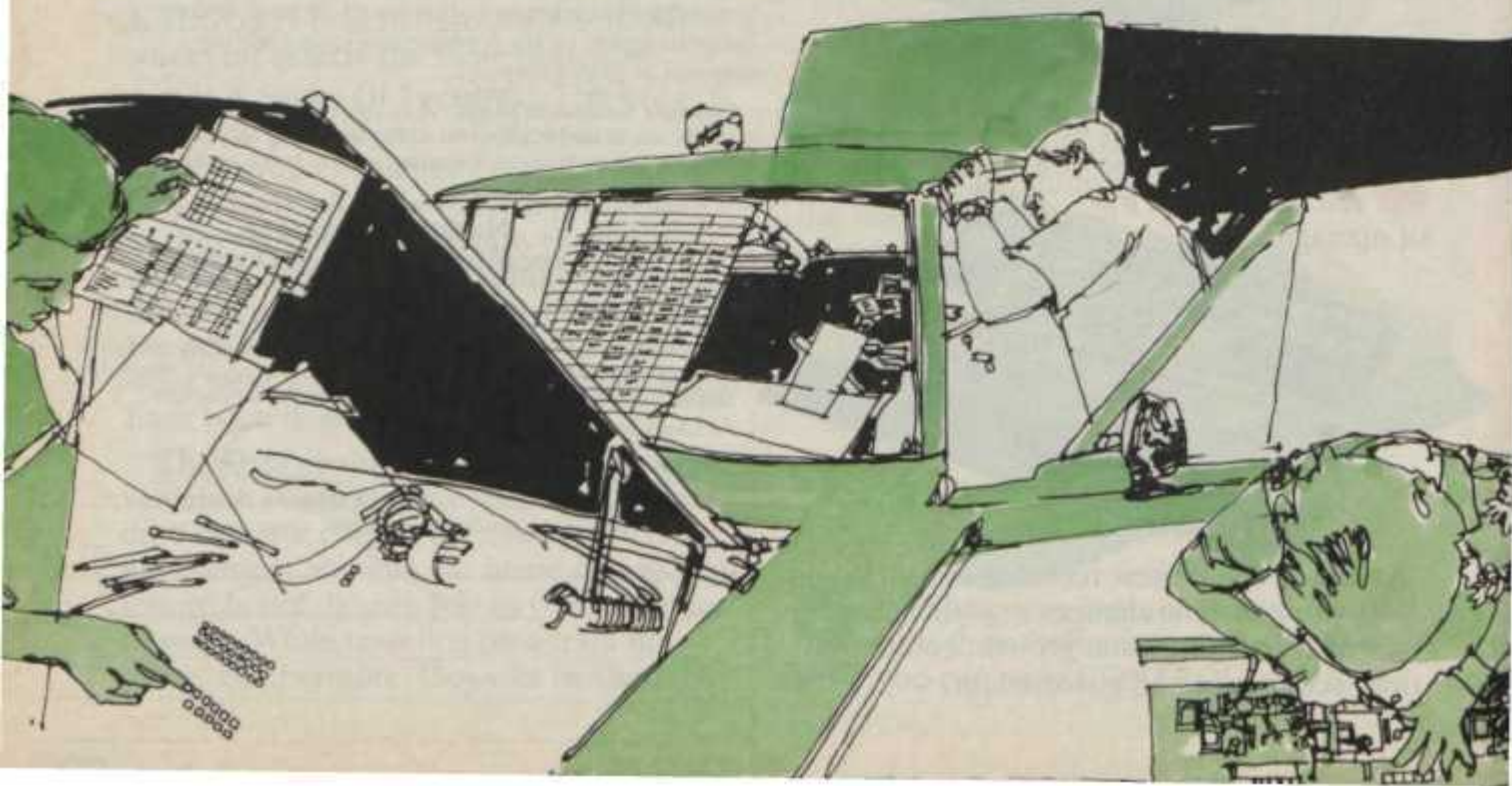
The inability of management to balance staff against volume, to staff for less than peak loads, or to adjust staff in nonbusy hours creates periods where there is no work available for some employees. This accounts for 15 percent of the hours wasted through poor work force management.

Poor coordination of resources with material flow and lack of work discipline—starting late and quitting early—account for the remainder.

A planned cure

The need to increase worker productivity is endorsed by every businessman. But productivity is traditionally defined as plant productivity, where big investments are needed to increase total output.

Unused work force productivity is



different. It can only be increased by a finite amount—say, from 15 to 30 percent. But, unlike plant productivity, the costs are minimal, and the increase takes only a comparatively short time to achieve.

The process used to reduce this non-productive time is known as work force management, and it can be adopted by any company. It requires planning and seven basic steps.

These are:

- **Assign responsibility for planning and scheduling.**

The responsibility for day-to-day administration of scheduling should be identified and assigned.

- **Develop and conduct ongoing training programs for supervisors.**

All supervisors should be trained in management controls and basic functions of management. Supervisors should know general management principles, measurement techniques, and systems of planning and control.

- **Review the company's organization, layout, methods, procedures, and work flow.**

A company's division and distribution of tasks can result in duplication and poorly coordinated activity. Considering a department's mission, rather than its structure, will help identify how elements can best be joined to attain greater productivity. Analyzing methods, procedures, and work flows will lead to adjustments which will increase productivity.

In one chemical plant, for example,

employees in one department were performing a task which was repeated by another department. The first department regarded the task as fill-in work, the second considered it important. Upon review, the company eliminated the duplication.

- **Establish a reporting system.**

A successful work force management program requires analysis, reporting, and implementation. Set up an effective reporting system. One method of accomplishing and tracking improvements is a steering committee, consisting of a senior executive, subordinate managers (if any), and the supervisor whose work is reviewed.

- **Develop a measurement base.**

Proper planning and scheduling of work requires a data base of consistent time-to-work relationships. Develop scheduling targets by work sampling, by detailed study, and by employee self-reporting of activities and work volume.

Measurement of work content is viewed as something mystical, devious, or threatening. To measure is to establish a time-to-work relationship for effective planning and scheduling. Measurement of work is not an end; it is a tool for accomplishing other management functions.

In one company, for example, management was concerned that the employees would resist measuring and establishing work standards. The employees, however, regarded measurement as a progressive move. They saw

that the standards were objectively derived and reasonable, and they accepted them readily. Some employees expressed relief at "knowing what is expected."

- **Develop schedule and control mechanisms.**

Measurement of work itself has little value. It becomes valuable only when used to monitor performance against it. Establish a scheduling system that visibly avoids potential peaks and valleys in the work load.

- **Test your system.**

To discover and correct the flaws, test the system in operation and modify it to conform to actual day-to-day operations. Do not mistake resistance to change on the part of your employees for a basic flaw. Test the system thoroughly.

Although straightforward, the process of increasing work force productivity demands attention. Total planning, estimating, scheduling, assignment, follow-up, and control can be designed effectively by recognizing the interdependence of all these elements. The output of one employee becomes input to the next. And the size of the work force can be adjusted to the amount of work to be done. □

MR. MARCUSSEN is associated with Theodore Barry and Associates, a management consulting firm in Los Angeles.



To order reprints of this article, see page 62.





Marcia Hatfield turned her stories about the Toothbrush Family into a business.

Mother's Tales Are Foundation for Success

Marcia Hatfield brushed off a few stories that she used to tell her three children and conquered the world of dentistry.

Mrs. Hatfield is an Australian television writer who formed her own company, Roymark Proprietary Ltd., to promote the stories.

The stories, about the Toothbrush Family, have been made into animated cartoons by a Canadian firm and are now being shown on CBS's "Captain Kangaroo" show. They have been endorsed by the World Health Organization, the American and Canadian dental associations, and half a dozen other dental associations.

"It's such a simple idea," says Mrs. Hatfield, who was interviewed by *NATION'S BUSINESS* on a trip abroad from her home near Sydney, Australia. "I stumbled onto it because I had a problem in common with most parents. My youngest son refused to clean his teeth. So I made up these stories about toothbrushes to show that taking care of teeth can

be a fun thing, not just a tedious chore."

The Toothbrush Family includes Toby and Tina; their parents, Tom and Tess; lovable old Gramps; a cousin, Hot Rod Harry (the electric toothbrush); Shaggy Dog (who is everything a toothbrush should not be and is used mainly to clean the tiles); Flash Fluoride (the toothpaste, who occasionally suffers stomach cramps from being squeezed in the middle); Nev Nailbrush; Susie Sponge (who loves to be squeezed but has a weight problem because she drinks too much); and Cecily Comb and Bertie Brush (who inevitably end up hugging each other in the medicine cabinet).

They all come to life at night when a magic moonbeam comes through the bathroom window.

"After I had drilled Toothbrush Family adventures into my children, the stories were buried for nine years," says Mrs. Hatfield. "Then I bumped into this man I had once worked with. He said, 'I've been looking for you. I'm ready for your Toothbrush Family now.' It was astonishing to think that he had remembered my telling him about those crazy stories."

"Well, I dug them out and had them edited by dental experts. Then we made records of the original 12 stories, and

that was followed by books, games, puzzles, and T-shirts, but only in Australia, mind you."

The Toothbrush Family became almost as familiar as President Carter's teeth after a presentation at a world dental congress in Sydney in 1976. "It was like spontaneous combustion," says Mrs. Hatfield. "I started getting letters from companies all over the world, wanting to use my little characters."

She began an adventure of her own, traveling first to Japan, and then to Canada, the U.S., and Europe, with the blessings of the Australian Department of Overseas Trade. The magic of marketing soon enveloped Mrs. Hatfield and her idea.

"It was very exciting," she says. "I found all the doors open, even in Japan. Now I have agents in London, New York, and Tokyo. And two U.S. companies, Hanna-Barbera Productions and Ancillary Enterprises, Inc., do the production and licensing of consumer goods based on the Toothbrush Family. It's what every writer dreams about."

Ironically, Mrs. Hatfield says, "I've had bad teeth all my life. When everything settles down a bit, I am going to have them capped." •

Where Have All the Slide Rules Gone?

Thomas R. Nye is the focal point of a 110-year-old company whose initials are as familiar to engineers as their own.

Mr. Nye is president and chief executive officer of K & E, the Keuffel and Esser Co., which manufactures and/or distributes products ranging from drafting paper to surveying equipment to 1,000-pound Micro-Master cameras.

When he took over leadership of the Morristown, N. J.-based firm in 1970, the K & E catalog displayed more than 10,000 products, and the company was in the red.

Today the company is well into the black, and the product line has been trimmed to about 7,000 items. Among the discards is the venerable wooden slide rule, without which, at one time, no engineer worth his degree could function.



Thomas R. Nye dropped slide rules.

"Let's face it," says Mr. Nye, "the slide rule's time was past. My son can work a slide rule, but he can use a calculator much faster. So can most people."

Mr. Nye, whose background is financial management and whose M. B. A. is from Harvard, says the company decided against manufacturing calculators in favor of selling those made by Texas Instruments. "In our Morristown headquarters, there is a gold slide rule," he says. "In 1975, we received a gold calculator for selling TI products."

The reason for that is K & E's distribution system, which covers the United States like air covers earth. Under Mr. Nye, K & E has vastly changed that system.

In the past, salespersons at K & E outlets didn't necessarily know the first thing about a particular product they were selling. That, Mr. Nye says, was quite a handicap because expertise was needed to sell products of an electronic age—products such as digital surveying equipment, photogrammetric instrumentation, and analytical compilers.

Mr. Nye grouped K & E products into 12 categories. Now when a customer wants to buy a certain type of product, he is helped by an expert in that field.

In addition, the sales force now actively goes out after business rather than waiting for it to come in.

What about the slide rules? Where have they all gone?

"They are fast becoming a collector's item," says Mr. Nye. It took 2½ years from start to finish to make a wooden slide rule—the mahogany core had to be aged—and 36 production steps. During the 1950's, 250 K & E employees manu-

factured 20,000 slide rules every month.

"When we decided in 1970 to drop slide rules, we had about three years of wood and other supplies, so we phased out the item," Mr. Nye says.

"At the same time, our market research showed a lingering demand, so we continued making plastic slide rules. We now have about \$30,000 worth of inventory left—not a lot, but it will move."

Will the slide rule eventually disappear completely? "No," says Mr. Nye. "You will always have those who will pass on the skill. There are still people using abacuses." •

A Bank With Guns and Minks in Its Vaults

William K. deVeer knows several thousand people by name. He also knows about their houses, their pools, their valuables, and their bank accounts.

Mr. deVeer is president of the First National Bank in Palm Beach, Fla., a small town where "serious money" abounds.

"People of affluence live here," he says. "They are important in their respective fields, and they are accustomed to being deferred to. I have to know their names."

He is also, of course, a disciple of discretion about their personal affairs.

A former attorney and bond broker in New York City, Mr. deVeer has been president of the bank since 1965 and is involved in "all the clubs and civic activities in town. I meet my customers everywhere, and if a house guest of someone I know wants to write a few hundred-dollar checks, I can simply say yes without any annoying delays."

First National, founded in 1927, has other extraordinary ways of ministering to its 13,000 customers. For example, there is a Mansion Expansion program for home or condominium improvement. "At one time, we were the only bank in the country that would lend money to homeowners to put in pools," Mr. deVeer says.

There is not much call, however, for auto loans, a field in which many banks are active. Most of First National's customers pay cash for their cars.

The bank's vaults hold furs—2,000 to 3,000 minks, ermines, and chinchillas—as well as rare wines, silver and gold objets d'art and tableware, gun collections, and "Lord knows what else," says Mr. deVeer. "The water table is very high here, and there are few cellars for storage. What our founder started as a favor to a few customers back in the 1940's quickly became a special service."

"We have had some pretty unlikely things in our vaults. We had a Yale Uni-



William K. deVeer offers his bank's customers vault storage for furs.

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versity racing shell once—the crewmen were vacationing here—and during the rubber shortage days of World War II, some customers cached their automobile tires at the bank."

First National also relieves its customers—who have included such people as the Duke of Windsor, Gary Cooper, Bing Crosby, Walter Chrysler, Clark Gable, Florenz Ziegfeld, and George Gershwin—of another vexatious chore, balancing the checkbook. For customers who demand it, the bank deposits their dividends, pays their monthly bills, and keeps their checking accounts in equilibrium.

As might be expected, First National has few peers in profit ratios. The bank earned \$3.2 million on assets of \$203 million in 1976. That is a return of more than 1½ percent. Most banks would be happy with one percent. But when you are privy to fortunes, says Mr. deVeer, you make every penny count. •

Solving the Mystery of Wines

Robert Finigan drinks a lot on the job. In fact, he spends at least \$15,000 a year on bottles of wine, from assembly-line half gallons to the pride of the French chateaus.

Mr. Finigan is president and majority owner of Walnuts and Wine, Inc., a California company that publishes restaurant guides and the monthly "Private Guide to Wines," which he writes.

"There is nothing all that mysterious about wines," says Mr. Finigan, who buys his bottles the same way his 10,000-plus subscribers do—across the retail counter. "All wine starts with grape juice. What the producers do with that grape juice makes the difference."

To some red wines of Portugal they add brandy, and after aging, end up with port. Why brandy? "Because when England and France were having one of their periodic wars, England turned to Portugal for wine," Mr. Finigan says. "The wine wouldn't keep through the long ocean voyage, so they preserved it with brandy."

Why is one wine better than another? "It's all relative," says Mr. Finigan. "Wines made in the classic way, from a good harvest with plenty of sun and the right amount of rain and aged long enough but not too long, will simply taste better than those forced through the

process with chemical additives. In the end, it depends on individual taste. If you like a New York State red and don't like a French claret, don't hesitate to assert your preference. However, don't dismiss Spanish or Italian reds until you have tried a few."

Mr. Finigan is independent of any vineyard, winery, or importer. In his monthly guide, he peels away the mystique of wine label nomenclature and recommends what wines to buy. "Of two German wines, for example, both priced at \$4.80 a bottle, one can be grapy and watery like a \$1.59 wine, and the other can be at its peak," he says.

He adds: "There are several \$5 bottles of wine on the shelves that are superior to \$15 and \$20 bottles."

How do you tell good wine from bad? "It's not so much an extrasensitive palate or a connoisseur's nose," says Mr. Finigan, whose background includes an M. B. A. from Harvard. "You can train your taste to appreciate the nuances of good wine."

"Some people have the knack of linking what they are tasting with what they have tasted in the past. It's a neural connection that says this wine has more body than one you had last week."

What does the educated palate like?

"An 1865 Chateau Latour, a red Bordeaux. That wine cannot be compared to today's French wines because the phylloxera [a vine louse] wiped out nearly all the vineyards in the 1860's and 1870's, and French wine has never been quite the same since."

"I went to a special auction of that wine in London and had a sip. It was the essence of the Cabernet grape. A bottle cost \$800. I didn't buy one; but the taste will stay with me forever." □



Robert Finigan tastes wines for a living and tells what is good and bad.

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Many firms—Avon, Colgate-Palmolive, Philip Morris—are sponsoring tennis tournaments for business reasons. Here is Arthur Ashe, former member of the U. S. Davis Cup team, playing in the first professional tournament that was sponsored by American Airlines. It was in 1974, at Tucson, Arizona.



John Gardiner's Tennis Ranch on Camelback, near Phoenix, Ariz. (left), is a favorite of tennis buffs like Joseph Coors, president of Adolph Coors Co., and Robert W. Galvin, chairman of Motorola, Inc. Mission Hills Country Club, Palm Springs, Calif. (right), is the site of American Airlines' annual Pro-Am Executive tournament, where mixed teams of businessmen and tennis pros compete in double matches.

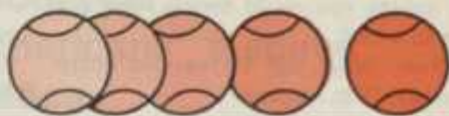


PHOTO: JOHN TIGHE



Skyline Racquet and Health Club, in Falls Church, Va., is one of the newest of some 1,000 indoor tennis courts in the U. S. Located on the roof of a shopping center near Washington, D. C., it has seven courts, open from 6 a.m. to midnight.





Love Affair With Tennis

By John Costello

IF LITTLE Uhrichsville, Ohio, had harbored a few more tennis buffs like Ben Westhafer, he might still be living there.

Ben, now a successful Tucson businessman, hated to pull up roots from his native place.

"I loved that town," he says. "Basically, the reason I wanted to get out of Uhrichsville was that I didn't have anyone to play tennis with."

So, back in the 1940's, he left.

Now, in sun-splashed Tucson, he's in Eden. Tennis partners there are as plentiful as cactus.

"That's the only reason I came here," he says happily. "To play tennis."

Ben got hooked on the game as a kid, playing on a neighbor's backyard court. At 61, lean and trim, he still plays a hard-nosed game.

In tournaments, he takes on the 50-year-olds.

"If I played in my own age group," he says, "I wouldn't have any competition."

The former insurance agent, hydroponic farmer, and boarding stable proprietor, who now is a kennel owner, is a regular at the Randolph Tennis Center, where 16 all-weather courts are open 14 hours a day.

"Ben is one of many local businessmen who manage to play regularly here," says James S. Reffkin, full-time pro at the public center.

The tennis bug that nipped Ben bites businessmen at various stages of life.

TAKE Robert W. Galvin, chairman and chief executive officer of giant Motorola, Inc.

"I took up the game seriously when I was in my thirties," says the 55-year-old executive. "It was a cool, calculated choice with me, not a sudden whim."

"I looked on it as a sport that was

great fun and a very efficient form of exercise. Furthermore, it was an activity that was available 12 months out of the year. And one that could be shared with friends and family."

He's a regular visitor to John Gardiner's Tennis Ranch near Phoenix.

TO Ralph E. Whitmore, Jr., chairman and chief executive officer of Alaska Bancorporation, that tennis ranch is the mecca of tennis players.

At least twice a year, he and his wife Nancy board a Western Airlines jet in Anchorage, Alaska, and head for Phoenix.

Six hours later, they are at the tennis ranch.

There, for about \$780 each, they can stay and polish up their game in a six-day clinic geared to hone their individual skills. The package includes a deluxe casita suite, meals, swimming pool, Jacuzzi whirlpool bath, sauna, and 22 hours of coaching from a staff of 30 tennis pros.

"Apart from my family," the 45-year-old banker says, "tennis is one of the most important things in my life."

He and his wife took up the game about four years ago. That was after he struck it rich on the North Slope.

The Wharton School graduate and onetime wildcatter gave a \$25,000, 60-day note—and \$10 cash—for royalty rights on 12,701 acres near the first Prudhoe Bay discovery well.

Before the note was due, he turned down an offer of more than \$350,000 for the rights. Instead he traded them for 300,000 shares, 88 percent of the voting stock, of Alaska Bancorporation. The stock now sells at about \$6 a share over the counter.

AT dusk, the players, some wilted and limp, desert the green acrylic-surfaced tennis courts and drift to-

ward the bar in the big Gardiner ranch clubhouse.

The clubhouse sits up on Camelback Mountain, its wide windows looking out across Paradise Valley.

There, in the hum of conversations, topic No. 1 is tennis.

"After a week here, playing seven hours a day, you feel fantastically fit," Ralph Whitmore says.

"Really super," says Nancy.

At a nearby table, a small, slender blond in a blue halter and a smart tennis skirt sighs happily to husband and friends:

"I hit a great forehand today."

BUSINESSMAN Tom Dinwiddie, a muscular six-footer, would understand that sense of exultation.

"Tennis is fun," he says, "but mainly it's a challenge."

"It's so hard to improve your game even ten percent. Every day I play, I go out with the feeling that this is the day I'm going to play better than I ever did before."

He adds wryly: "Usually, I don't. But it's a heck of a challenge."

Tom is the owner of a Baskin-Robbins ice cream store in Tucson. Like Ben Westhafer, he is a regular at the Randolph Tennis Center.

Five days a week, if possible, Tom snaps on his crash helmet, hops on his Honda, and bikes seven miles from his Skyline Belaire home to midtown Tucson and the center.

"I used to play pickup basketball at noon at the Y for exercise," he says. "Those games were like war."

One day, he collided with the gym wall and suffered a double compound fracture of his arm. It was in a cast for six months.

"I started to get fat because of lack of exercise," he says.

Tennis, he discovered, was one of the

few sports you could tackle with one arm in a cast.

"Now," says the 42-year-old entrepreneur, "I'm hooked."

THE Dinwiddies, Galvins, Westhafers, and Whitmores are hard-core tennis buffs.

"That class plays at least once a week, the year around," says David R. Grant, director of marketing for The Penn Athletic Products Co., America's largest manufacturer of tennis balls. "About six or seven million players fall in that category."

Many more Americans play some tennis, the U. S. Tennis Association points out. A recent A. C. Nielsen survey puts the total U. S. tennis population at 29.2 million.

That's nine million more than an earlier nose count in 1973—a 45 percent increase.

Half of the nation's tennis players are white-collar workers, Target Group Index reports. Nearly six out of ten, the research group adds, are college graduates or went to college.

There are 141,000 courts in the U. S. where they can hit and keep fit. About 9,000 courts are indoors, mostly in privately operated clubs.

"Five hundred and fifty clubs are members of the National Indoor Tennis Association," says the association's Executive Director John M. Aldworth.

"That's 55 percent of the private indoor clubs, and the percentage is rising."

For balls, rackets, clothing, court time, instruction, and other necessities, players spend about \$1 billion a year, according to a 1977 estimate.

"They may be spending ten percent more than that now," says Alfred S. Alshuler, Jr., partner in Tennis Planning Consultants, of Chicago.

"Here's what it will cost a tennis player to outfit himself or herself for the court:

"Shoes, \$10 to \$25; socks, \$2 or \$3 a pair; shirt, \$12 to \$25; shorts, \$7 to \$15; women's tennis dress, \$20 to \$80; tennis balls, \$2.50 to \$3.50 a can; racket, about \$25 for a wood racket, \$50 to \$100 for metal, \$50 to \$200 for the new graphite type."

TENNIS "owes its popularity to a subtle change in our life-style," says Paul H. Luckett III, president of The Penn Athletic Products Co.

"Today Americans are far more interested in being physically fit and do-

ing something to stay that way. I'm no jock, but I play at least a couple of times a week.

"Tennis is a sport that's tailor-made for a busy guy. It's convenient. There are lots of places to play, even in a big city. And it's not time-consuming. In an hour and a half on the court, you can get a good workout.

"Also, it's a change of pace and mentally relaxing. A businessman needs an outside outlet, and tennis is a terrific one."

Mr. Luckett was in his thirties before he made that discovery.

"I didn't begin playing until about 1966, when I was a marketing executive with El Paso Products Co. in Midland, Texas," he says.

"Now, even when I'm off on a business trip, I always carry my racket."

AT ONE TIME in Texas, not many husky six-footers like Mr. Luckett were found running around a court in white shorts and ankle socks, chasing a tennis ball.

"Tennis had an image problem," says the Randolph Tennis Center's Jim Reffkin, who was a captain of Marquette University's tennis team in his pre-Tucson days. That may go back to

Expert Advice for the Occasional Player

If you are an occasional tennis player—a man or woman who plays perhaps a couple of times a month—two things are particularly important for you to know, says Tony Trabert, captain of the U. S. Davis Cup team and member of the Tennis Hall of Fame.

First, he says, you should learn how to warm up properly before the game and how to cool off properly afterward.

"Too many players," Mr. Trabert told *NATION'S BUSINESS*, "rush out on the court without any preparation. They should put on a warm-up suit first and exercise enough to perspire a little. You can do that by running in place, jumping rope, hitting a ball against the wall or in a practice court, or doing stretching exercises.

"If you get up from a desk, rush out to the court, and start chasing balls, you may pull a muscle or develop tennis elbow.

"After a match, you should pull on a warm-up suit or sweater and cool down.

"Don't sit around in sweaty tennis togs enjoying the breeze or drive right home with your arm out the window of your car. If you do, you will stiffen up and run the risk of muscle injury."

Second, Mr. Trabert advises, if you are playing doubles—and the majority of people who play occasional or weekend tennis play more doubles than singles, he says—you should learn where to stand and where to hit the ball.

"Your basic volley position is not quite halfway between the service line and the net," he says.

"When an opponent is serving to your partner, stand with your heels on the service line. That way, if your partner makes a weak return, you're far enough back to react and cover your side of the court.

"On the other hand, if he makes a good return, you should move forward into the normal volley position."

Mr. Trabert, who is the author of "Winning Tactics for Weekend Tennis," says that in playing doubles it is

a good idea to hit the ball up the center of your opponents' court. That way, they may be confused over who should take the ball. Also, they have less of an angle for their return, and it will be easier for you or your partner to get to the ball.

In addition, Mr. Trabert points out, "Hitting up the middle gives you a wider target. Hit down the alley, and even if you meet the ball well, you are more apt to miss the court since you are aiming at a smaller area. Also, if an opponent is in a position to make the volley, you have opened up your court to a sharply angled return that may be hard to handle."

When one opponent is at the net, and the other is back, Mr. Trabert says, "Hit to the one who is farthest away from you, if you hit up. However, if you are in a position to hit the ball down at the feet of the closer opponent, hit down to him.

"Your basic strategy is to try to make your opponents hit up to you, so you can hit down at them."

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the origin of the game. Modern tennis was invented a little more than a century ago.

British Maj. Walter Clopton Wingfield staged the first lawn tennis match at Nantclwyd, Wales, in 1873.

An earlier, indoor version of the game was once the rage of French and British aristocracy.

But lawn tennis, as Maj. Wingfield put it, "has the advantage that it may be played in the open air in any weather by people of any age and both sexes. Moreover, the merest tyro can learn it in five minutes."

"That game must have been pitty-pat," says husky Jim Reffkin. "It may help explain why tennis was once thought of as a sissy sport. At least it was where I grew up, in East Chicago, Ind.

"But all that has changed—the image and the game. Most men who play come out to hit."

WOMEN "can play tennis as well as men, at least below the tournament level," says tennis ranch proprietor John Gardiner.

"Remember, the object is to strike a moving target, and much of the game is timing. Women who can get out and practice and keep up their timing are going to play better than a man who can't—even if he has talent."

Some men have learned that lesson, to their chagrin, after they walked on the court with Vera R. Wombwell.

Ms. Wombwell is with Arthur Andersen & Co. in Chicago. She often plays with clients of the firm—usually male—to make up a doubles or singles match.

She usually beats them.

When she's in town, she plays at the Mid-Town Tennis Club, if she can. It is the Windy City's biggest indoor club, with 18 courts and more than 2,000 members.

Three years out of the past four, Ms. Wombwell has been ranked the club's No. 1 woman player. One year, she was No. 2.

Says Ms. Wombwell: "Most men don't mind losing to a woman if she's better than they are. It's an insult to the other player if you let him win."

Yet, once she was tempted.

Her opponent, a corporation chairman whom she had trounced before, was an important client of a tennis-playing partner of Arthur Andersen & Co.

"Should I let him beat me?" she asked anxiously.

"Hell, no," the partner replied, let-

ting tennis principles rise above possible self-interest.

Ms. Wombwell was a late convert to tennis—she was in her thirties. So was Carol Gertz.

Mrs. Gertz has made the sport a business career as well as a hobby. She is a partner in Tennis Lady, a retailer of women's tennis togs—clothes and accessories.

Tennis Lady has mushroomed like the sport.

Carol and partner Adrian Mnuchin started with a small store on New York City's East 68th Street in 1971. Now Tennis Lady is a 16-store chain with branches in Atlanta, Beverly Hills, Chicago, San Francisco, and Washington.

IN EARLY December, Peoria, Ill., was hit by a horrendous snowstorm. Ten inches fell on Friday night. By Saturday morning, drifts were fender deep.

Not even the U. S. Postal Service's dedicated couriers have deeper devotion, however, than a red-hot tennis player.

Hip-high drifts didn't keep Richard N. Ullman from his usual Saturday game at the Central Illinois Racquet Club. Nor did snow deter John R. Roesler.

Dick Ullman is president of The Federal Companies, with home offices in Peoria. John Roesler is an executive with IBM's branch office there.

Dick, 43, has been playing tennis since his high school days. John, seven years older, has been playing since 1962.

Both are regulars at the Peoria Club on Saturdays—sun, rain, or snow.

THAT KIND of dedication to the game reminds some of a story. It's a favorite of Bud Collins, well-known TV tennis commentator and sports writer for "The Boston Globe." He credits it to Tony Roche, the Australian Davis Cup star.

In a tough, tense match, one player put so much into a key serve that the racket flew out of his hand. Worse, it went into the stands and struck a spectator on the head.

No sport, the man dashed out and called the police. When they arrived, they arrested the player for assault with a deadly weapon.

"That's awful," a friend said consolingly.

"Oh, I didn't mind that," the player replied, "but it was a double fault." □

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The World of Industry

continued from page 8F

of change currently being enjoyed by China continues, then they will achieve their goal of technological excellence by the turn of the century." •

New Fence May Foil Coyotes

The wily coyote may have met his match in a new fence, designed by an Australian inventor, which has been adapted for use in this country by the government's Agriculture Research Service.

While there aren't any coyotes in Australia, there are millions of sheep. The fence was designed to keep sheep corralled. It can do the same in this country and, it is hoped, keep the predatory coyote outside the perimeter—and hungry.

Conventional electrified fencing sends a charge through all the fence wire. To receive a jolt, a coyote must simultaneously touch the wire and have one paw on the ground. But smart coyotes have learned to leap and scramble over fences without touching wire and ground at the same time.

The new fence alternates electrified and grounded wires from top to bottom. Theoretically, this will make it impossible for a coyote to avoid simultaneous contact with a charged wire and a grounded wire.

Ranchers, who favor poison or a trusty rifle, are going to be cautiously optimistic. •

Flying Fire Engine Developed for High-Rises

An airborne fire and rescue vehicle that can carry fire fighters to high-rise buildings, ships in distress, and other inaccessible spots is being developed by McDonnell Douglas Corp.

A prototype, called a Suspended Maneuvering System, will be tested this spring. It is basically a one-ton, seven-by-eight-foot platform that is suspended beneath a helicopter by a cable.

At the scene of an emergency, crewmen use a high-speed 36-inch fan to deliver air to four controllable nozzles by which the vehicle can be maneuvered up to 250 feet in any direction. Meanwhile, the helicopter hovers overhead, well clear of smoke and air turbulence. The SMS will transport four to eight fully equipped firemen or paramedics and could rescue up to 16 persons at one time.

McDonnell Douglas began evaluating the SMS concept more than two years ago after encouragement by national fire and rescue officials. A survey found that there are about 600 serious high-rise fires in the U.S. each year and that an SMS-type vehicle would be useful at many of them. •

Modest Defense Growth Seen for Electronics

The national defense electronics and communications market will grow at a conservative 3.3 percent annual rate through 1987, according to the Electronic Industries Association.

Overall, the association says, the market will be \$13.8 billion in fiscal 1978 and will grow to \$18.5 billion by 1987. Sixty-one percent of this growth is expected to come from procurement; 27 percent from research, development, and testing contracts; and 12 percent from operation and maintenance requirements.

The Washington-based association predicts the principal defense electronics market growth in the next five years will be to satisfy requirements for missile, spacecraft, and ship programs. In the 1983-1987 period, the association says, the principal market growth will be due to increasing needs of aircraft, electronics, and communications programs under development by the armed forces. •

Employers Plan to Hire More Graduates in 1978

The nation's largest employers in business plan modest increases in their hiring of college and university graduates during 1978, according to Northwestern University's annual Endicott Report.

Overall demand for bachelor's de-

gree graduates will be up about 14 percent. For master's degree graduates, the increase will be about nine percent.

The survey of 200 corporations which regularly recruit college graduates finds a positive outlook. Ninety-six percent of the companies believe business will be better or about the same this year, while only four percent think it will not be as good as in 1977.

A majority of responding firms say an M. B. A. degree is not necessary to reach a high-level management position. However, tuition reimbursement programs are widely available to employees who earn higher degrees. Specialization in finance and marketing is favored. •

Business Emphasizes Short-Term R & D

As the cost of research and development rises, business is generally shifting from long-term to short-term R & D activities. Emphasis is being given to market-related modifications of current products and to immediate pay-offs, according to a report by Battelle Columbus Laboratories.

Battelle forecasts that domestic R & D funding will reach more than \$44 billion this year, but that inflation will absorb any real growth.

Breaking down predicted expenditures by source, the report says 53.1 percent of R & D funding will come from the federal government, 43.2 percent will come from industry, 2.2 percent from academic institutions, and 1.5 percent from nonprofit organizations. •

Boom Year Ahead for Truck-Making

Truck sales, which last year totaled an estimated 3,675,000—approximately 15 percent ahead of 1976—are predicted to approach four million this calendar year.

Big gains in heavy-duty trucks marked 1977 as a healthy sales year. An estimated 173,800 heavies were sold, a robust 45 percent increase over 1976.

Industry sources are now talking confidently of total truck sales in 1978 topping 3.9 million, of which 185,000 would be heavy-duty units.

In anticipation, General Motors' truck and coach division has announced plans to discontinue produc-

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tion of luxury motor homes and similar multipurpose vehicles and convert those plant facilities to expanded truck operations. •

Big Gains Predicted for Small U. S. Cars

By the early 1980's, U. S. compact and subcompact cars will be much more competitive with foreign makers, according to a study of trends in the automotive industry.

Arthur D. Little, Inc., a management consulting firm based in Cambridge, Mass., says that subcompacts will account for more than a third of the 1985 passenger car market, gaining primarily at the expense of full-size cars.

Based on today's size definitions, the study predicts that the 1985 product mix will be: Subcompacts, 35 percent; compacts, 27 percent; intermediates, 29 percent; and full-size, nine percent. In 1977, the mix of these size categories was: subcompacts, 27 percent; compacts, 26 percent; intermediates, 23 percent; and full-size, 24 percent.

The increased smaller car production will stem from federally mandated vehicle performance standards for emissions and fuel economy, says Donald A. Hurter, who headed the study. •

Textile Sales Gain, but Earnings Drop

The nation's textile industry wound up 1977 in pretty good shape, but the future is clouded by rising imports, possible tariff cuts, stiff regulatory actions, and energy uncertainties, says Robert P. Timmerman, president of the American Textile Manufacturers Institute.

Mr. Timmerman says sales reached \$42 billion last year, a 12 percent gain over 1976. Unfortunately, he says, textile profits were down.

"Our earnings per dollar of sales are estimated at 2.2 percent through September, well below the nation's 5.3 percent manufacturing average," Mr. Timmerman says, "and substantially less than our 2.4 percent performance of a year ago."

The industry faces expensive new noise and dust standards in 1978, he notes. Its sluggish profit performance reflects stiff domestic competition, heightened by increasing textile imports from low-wage foreign nations, Mr. Timmerman adds. □

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A Look at Basics in the Returnable Bottle Battle

By Phillip C. Katz

Would a national requirement that beverage containers be returnable result in lower prices to consumers? No, says this expert

EARTH DAY, 1969, sparked a national debate over ecological versus economic goals which is still continuing. Unfortunately, this debate often takes the form of the environmentalists versus business, with business usually on the defensive, to the detriment of sound economic arguments.

One such case is the controversy surrounding restrictive container legislation.

Supporters of so-called bottle bills contend that they would reduce litter and solid waste, conserve energy and resources, and produce lower prices on beer and soft drinks.

Four states adopt laws

Since 1970, more than 1,000 pieces of restrictive container legislation have been introduced in Congress and state legislatures. Thus far, however, only four states—Oregon, Vermont, Maine, and Michigan—have adopted such laws. Sen. Mark Hatfield (R-Oregon) has been active in recent unsuccessful efforts to pass a national mandatory deposit bill.

Those industries which would be most affected by bottle bills—brewers, canners, bottlers, and soft drink manufacturers—quite naturally have studied the potential effects of such legislation.

They have found that predictions of environmental benefits are, at best, questionable, and that the likely economic consequences for their businesses would be disastrous.



Mr. Katz is senior vice president, research division, of the United States Brewers Association, Inc.

With figurative battle lines drawn, opponents have pointed to the potentially negative consequences of bottle bills and to the positive effects of systematic litter reduction programs.

Effect on consumer prices

While these issues certainly deserve serious attention, perhaps it is time to get back to economic basics and look at the economics of returnable versus nonreturnable containers.

Major economic considerations include consumer prices, distribution costs, and other specific expenditures

for brewers, wholesalers, and retailers.

Many persons believe that a national system of mandatory deposits would result in lower prices to consumers, but this erroneous belief is based either on surveys of current prices or on incomplete analyses of the malt beverage industry.

First, there is a failure to recognize that current shelf prices for returnable bottles reflect historical pricing patterns and current demand, not current cost levels.

Returnable bottles in today's marketplace in effect are subsidized by more popular convenience packaging. Under restrictive container legislation, this subsidy would cease and prices would go up.

In the case of malt beverages, analysts point to the material savings that brewers are expected to enjoy. They ignore, however, the cost increases that would accrue to wholesalers and retailers, as well as the estimated \$2.5 billion in new investment that would be required of the brewing industry. The increases in shipping, handling, and labeling costs would more than negate whatever cost savings brewers might obtain.

Even if returnable bottles made ten trips, consumers would pay between 60 and 80 cents more per case using returnable bottles only, or between \$828.5 million and \$1,156.6 million annually.

Another argument of advocates of an all-returnable bottle system: Packaging materials account for about 50 percent of the brewer's total costs and expenses. So, by reducing the packaging cost through using returnable bottles exclusively, the price of beer would decline.

This contention considers only brewers' costs. The brewer actually accounts for only one of four factors that influence the consumers' malt beverage expenditures.

In 1967, for example, each dollar that the consumer spent for off-premise beer consumption generally was distributed as follows: Brewers, 46 cents; wholesalers, 15 cents; retailers, 14 cents; and government, in the form of taxes, 25 cents.

This means, of course, that the distribution system received 29 cents, about 65 percent as much as the brewers.

What would happen to costs

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able system, the situation worsens dramatically.

In the case of brewers:

- The liquid cost of beer would remain the same.
- Container costs could decrease.
- Supplemental packaging material costs would increase.
- Filling costs would increase.
- Handling costs would increase.
- Package-dependent costs (e.g., depreciation) would increase and package-independent costs (e.g., marketing expenses) could remain the same.
- Profit markup would stay the same or go up.

This would be the situation for wholesalers:

- Shipping costs would increase.
- Warehouse costs would increase.
- Delivery costs would go up.
- Other expenses would remain the same.
- Profit markup would remain the same or go up.

And this would be the effect on retailers:

- Handling costs would go up.
- Display costs would go up.
- Storage costs would increase.
- Other costs would remain the same.
- Profit markup would stay the same or increase.

The impact on government revenue is not certain. Federal, state, and local tax rates would remain the same, although the amount of sales tax added to the higher prices would, of course, increase. Excise-tax revenues, however, could decline if sales decrease.

Savings outweighed

Thus, in considering the overall economic consequences, the only cost item in the total production and distribution system which could decrease would be direct container costs. Most other items in the chain would definitely increase, while some would either remain the same or increase.

The key question is:

Would savings in container costs more than offset the other cost increases? Quite frankly, the answer is no. The ultimate cost to the consumer would be higher.

All arguments must be taken into account in a rational decision-making process. As mentioned at the outset, however, economic arguments often receive short shrift in environmental debates. By returning to economic basics here, it is hoped that the scales may be once more brought into balance.



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...in terms of 1900 purchasing power, the 1978 dollar is worth only 15¢?
...by the year 2000, there will be more senior citizens 65 and over than teenagers?

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PUBLIC POLICY ANALYSIS

In Defense of Tax Loopholes

By Dr. Murray L. Weidenbaum

Who benefits from the so-called loopholes? Primarily, lower and middle-income taxpayers. Why do loopholes exist? For public purposes that range from promoting economic growth to encouraging voluntary action

TAX LOOPHOLE is a pejorative term. It implies that some special advantage is gained by certain individuals or groups at the expense of the general public.

And we are told repeatedly that elimination of all tax loopholes would permit a massive reduction in tax rates without any overall decline in revenues.

The implicit trade-off sounds so desirable that we may wonder why the change has never been made. An obvious answer comes quickly to mind: The special interests have prevented it.

Although that rationale may possess some explanatory value, a strong case can be made for these so-called loopholes, based on a broader view of public policy.

A need for balance

In defending tax loopholes, I would not, of course, defend every raid on the U. S. Treasury. Nor would I support every special provision of the Internal Revenue Code which permits some taxpayers to de-

part from the basic structure used for taxing income.

As a general proposition, I favor the principle of horizontal equity—equal treatment of taxpayers in similar circumstances. It should be recognized that a cleaner tax code—one with fewer special provisions—could help achieve a greater degree of horizontal equity. At the same time there is room for legitimate quibbling as to who actually are the equals to be treated equally.

The taxpayer who voluntarily contributes a portion of his income to charitable institutions may quite properly be viewed differently than the taxpayer who has an identical income, but who devotes all of it to his personal gratifications. This would seem to be one of the many instances where sensible results are more likely to be achieved by carefully balancing a variety of important considerations than by single-mindedly attempting to pursue just one.

In the main, a tax loophole is not the product of an ingenious attorney

or accountant laboriously studying the minutiae of the Internal Revenue Code. Rather, the typical loophole is something deliberately placed in the law by Congress to achieve a public purpose.

To belabor the obvious, the charitable deduction was not inserted in the tax system to provide a windfall for the wealthy, but to foster philanthropy.

An act of grace?

In recent years the term tax expenditures was developed to describe the cost to the government of what have been labeled loopholes. A formal definition is somewhat formidable: "Revenue losses attributable to provisions of the federal tax law which allow a special exclusion, exemption, or deduction from gross income or which provide a special credit, a preferential rate of tax, or a deferral of tax liability."

On the surface, the phrase tax expenditure may seem to be an anomaly. Either something is a tax, or it is an expenditure. The tax expenditure concept, however, is based on the implicit assumption that the state is entitled to as much of the individual's income as it desires. Hence, the individual's claim on his income is secondary. Any reduction in the flow of private income to the public Treasury is viewed as an act of grace by a benevolent sovereign.

And yet a tax expenditure—if the concept is to have any justification—signifies less taking of private funds by the government.

This is a simple but powerful point. In my view, tax expenditures should be seen in the context of the substantial taxes which are paid by individuals and corporations. To tell a person who is paying out more than one third of his income in federal taxes that he is unduly benefiting from some tax expenditure reflects a strange view of tax equity.

If there were none

From a purely fiscal viewpoint, a dollar less paid in taxes has the same effect on the budget position as a dollar more disbursed by the government. But different consequences

may flow from reducing the tax than from increasing the disbursement.

Many tax expenditures, as they are intended to do, increase private spending in certain categories. Therefore, economic conditions are altered. The elimination of the tax expenditures might require offsetting changes in federal spending or in other aspects of the tax system, in order to avoid undesirable effects.

The tax exemption of interest received on state and local bonds is a case in point. On the surface, this exemption appears merely to provide tax relief to the holders of these securities. On that basis, prompt elimination of the exemption is urged in some quarters.

But, in reality, this tax expenditure enables states and localities to issue bonds at lower interest rates than other borrowers can.

The purchasers of these securities would certainly turn to higher-yield issues if the interest on state and local bonds were taxable. Thus, the tax expenditure implicitly involves a substantial subsidy to the governmental units issuing the securities. In fact, sophisticated proposals to eliminate or to reduce the number of tax-exempt securities call for federal subsidies to state and local governments to offset the higher interest payments they would have to make if their securities were taxable.

The public spotlight

Depending on the subsidy level, there could be a net loss or a net gain to the Treasury from the combination of closing the tax exemption loophole and simultaneously enabling state and local governments to continue selling bonds at low interest costs.

While certain tax expenditures, such as the bond interest tax exemption and depletion allowances, have been in the public spotlight, they comprise a relatively small portion of the \$95.3 billion of tax expenditures reported by the Treasury Department in fiscal 1976. Most of the \$95.3 billion consists of items which many people never think of as loopholes.

One of the largest is the deductibil-

ity of mortgage interest and property taxes on owner-occupied residences. This accounts for \$8.9 billion of revenue forgone in fiscal 1976.

Middle class benefits most

Other significant special provisions include deducting charitable contributions (\$5.4 billion of revenue loss to the Treasury), excluding from taxation employer and self-employed contributions to pensions (\$8.4 billion) and medical insurance premiums and medical-care programs for employees (\$4.5 billion), excluding from taxation Social Security and unemployment benefits (\$7 billion), and deducting personal state

payments (\$595 million of revenue forgone in fiscal 1976), Social Security benefits (\$2.7 billion), and unemployment benefits (\$3.3 billion).

At the same time, of course, several important types of tax expenditures primarily benefit corporations and relatively high-bracket income earners. Examples include the special tax treatment of capital gains (\$7.9 billion), the investment credit (\$9.5 billion), the exclusion of interest on state and local debt (\$4.8 billion), and the excess of percentage over cost depletion (\$1.3 billion).

Justifications put forward for special tax provisions are extensive. Objectives cited range from fostering

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This is not a plea for retention of every special provision in the tax system. It is reasonable to contrast the costs and benefits of various mechanisms for achieving public-policy objectives.
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and local taxes other than those on homes (\$8 billion).

The bulk of tax expenditure benefits is received by lower and middle-income taxpayers—an estimated \$56.5 billion out of the \$95.3 billion in fiscal '76.

Taxpayers in the middle-income category benefit more than any other group. The figures are \$38.6 billion for this category in fiscal '76 as compared to \$17.9 billion for the lower-income category and \$15.9 billion for the upper-income category. Tax expenditure benefits for corporations, it is estimated, came to \$22.9 billion.

Several large tax expenditures primarily benefit lower-income taxpayers. Examples include tax exemption for veterans' disability compensation

employment and economic growth to supporting worthy private institutions and state and local governments.

Promoting investment

The special treatment of capital gains, the investment credit, and similar items are justified by the need to promote investment. We should be aware of the obvious: To the extent that the private sector is unable to raise funds to finance economic growth, pressure rises for greater governmental involvement in business affairs.

Surely, in recent years, the federal government has become an important competitor for investment funds. The Treasury's financing of

budget deficits plus a growing array of federally owned or federally sponsored credit agencies have obtained one third or more of the funds flowing through the nation's capital markets. Viewed from this perspective, the various tax expenditures devoted to encouraging private investment may merely offset the effects of the government's spending and borrowing activities.

A form of revenue-sharing

The deductibility of state and local taxes furthers the objective of strengthening state and local government through federal sharing of the burden of the taxes levied by these jurisdictions. This can be viewed as an early revenue-sharing effort in the federal system.

Numerous reasons are cited for the tax deductibility of charitable contributions. The private institutions thus supported provide diversity and free choice. They can experiment and enter fields too controversial for government agencies. They often take on responsibilities which otherwise would be financed entirely by tax revenues.

The deductibility of interest paid by individuals on mortgages on own-

should subsidize families that go into debt to buy a new refrigerator or second car. The interest which individuals receive on their savings is, of course, fully taxable. Perhaps this provision illustrates the tax system's tendency to tilt in favor of consumption rather than saving.

Some personal deductions are really reasonable refinements of gross income that were made to obtain a fair taxable-income base. Cases in point are the deductions of such expenses related to earning income as union dues, child care for working wives, and fees on safe-deposit boxes for securities.

A few corporate tax exemptions—notably those for credit unions and for some of the income of cooperatives—are an aid to nonprofit institutions organized in the corporate form.

What critics say

Many special tax expenditures have been attacked as being regressive because they reduce the tax burdens of upper-income taxpayers more than those of lower-income taxpayers. Deductions from income clearly do have that effect—an upper-income taxpayer receives a larger tax

those expenditures for taxpayers in the top bracket.

From the viewpoint of achieving public-policy objectives, special tax provisions lack some of the compelling characteristics of direct government expenditures. In typical direct-expenditure programs, the public can have a clearer picture of the flow of federal assistance. Congress can exercise annual control over the size and distribution of benefits, and the financial aid given to private individuals and groups can be weighed against the desirability of government agencies taking direct responsibility for the programs in question.

This idyllic view, however, is not readily reconcilable with the reality of federal budget trends. In recent years relatively uncontrollable expenditure programs such as Social Security pensions, interest on the public debt, and welfare have come to dominate federal spending.

As pointed out earlier, this is not a plea for retention of every special provision in the tax system. It is reasonable to contrast the costs and benefits of various mechanisms for achieving public-policy objectives. Certainly, in some cases, direct expenditures may be a more desirable alternative than tax incentives. In some cases, credit assistance, regulatory programs, or other approaches may be preferable.

The advantages and disadvantages of each mechanism should be weighed, and the most desirable one used to achieve a specific objective, be it encouragement of business investment or discouragement of environmental pollution.

More federal control

However, the implications of moving from indirect support through the tax system to direct federal expenditure subsidies are profound, especially in the many instances of aid to private and state-local government institutions. Taken literally, as has been suggested by some tax reformers, this move would mean putting private hospitals, orphanages, schools, and similar social service and charitable institutions in the federal budget. The resulting opportunities for federal control over the conduct of these private organizations are obvious.

The choice between tax incentives and direct federal expenditures thus turns out to involve more than selection among technical financing me-

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A more effective approach to public policy might be to deal with the basic conditions that often prevent private institutions, business and nonprofit alike, from performing their intended functions—conditions that frequently result from the expansion of governmental activities.
”

er-occupied homes encourages home ownership, it is pointed out. The deterioration of many central cities in recent years has increased the desirability of such ownership as a means of enhancing family and neighborhood stability.

However, the deductibility of interest on general consumer debt may be more difficult to defend. It is hard to see why the general taxpayer

reduction than does a lower-income taxpayer for making the same dollar amount of charitable contribution or payment of state and local taxes.

In effect, the government subsidizes 14 percent of the state and local taxes and charitable contributions of the lower-bracket taxpayer when the taxpayer itemizes rather than taking the standard deduction. The government subsidizes 70 percent of

chanisms. The choice involves altering the balance between public and private power in our society.

Alternative to the deduction

Use of the tax incentive route does not require adhering to the tax expenditures now in use. For example, the deduction from taxable income is not the only way in which the tax system can be used to encourage people to spend some of their money in a manner which accords with national interests.

An alternative to the deduction is available—the tax credit, which is a deduction from ultimate tax liability rather than from taxable income. While ordinary deductions are implicitly regressive because of the progressive nature of the personal income tax structure, credits can be more flexible. A credit can be given in terms of a percentage of an expenditure, and a ceiling may be put on the amount of the credit. Moreover, credits can be used by the vast number of low and moderate-income taxpayers who do not itemize individual contributions, but use the standard deduction.

The credit concept is widespread in the corporate tax structure, where its use ranges from encouraging employment of welfare recipients to expanding business plant and equipment. In the individual tax system, credits are now provided for child and dependent-care expenses, retirement income, and political contributions. Suggestions that tax credits replace personal exemptions—the present \$750 deduction for each taxpayer and dependent—have been made by President Carter and others.

Same at different levels

Although the value of a deductible dollar varies with the taxpayer's bracket, this is not so in the case of a fixed percentage credit. With the credit, a given dollar of charitable outlays would generate the same amount of tax saving, regardless of the taxpayer's income level. Of course, upper-bracket taxpayers might make a larger donation and thus qualify for a larger tax benefit in the absolute, but they would receive the same benefit proportionally.

The tax credit mechanism could be important in strengthening the role of voluntary organizations in our national life by making them more democratic. Because the tax credit would operate to the advantage of



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The typical loophole is
... placed in the law
by Congress to achieve
a public purpose.
”

lower and moderate-income taxpayers, it could help create a potential new constituency for private institutions, freeing many of them from their present dependence on the wealthier.

Unlike the alternative of direct support through government expenditures, substituting tax credits for personal deductions would be a modest step toward decentralizing decision-making in America and encouraging diversity in the way social objectives are achieved.

A more effective approach

The fundamentally adverse impacts of government action on the private sector should never be overlooked in formulating tax policy. The simple elimination of tax expenditures often would leave unfilled the objectives they are designed to foster.

A more effective approach to public policy might be to deal with the basic conditions that often prevent

private institutions, business and nonprofit alike, from performing their intended functions—conditions that frequently result from the expansion of governmental activities. Dealing with those basic conditions would have the added advantage of avoiding the revenue losses and equity problems that may result from using tax incentives.

It is cavalier, to say the least, for tax reformers to blithely ignore all the adverse impacts of government action on private institutions and then pick on one of the few areas of public policy—tax expenditures—where the public sector tries to undo the damage.

As noted earlier, the tax expenditure mechanism serves a variety of public purposes, ranging from promoting business investment and economic growth to encouraging private, voluntary organizations.

Indeed, the growth of tax expenditures may be viewed as a reaction to the severe obstacles that the expansion of government power and activities have placed in the way of private-sector institutions.

Conclusions

To sum up, tax expenditures, in the main, are not special benefits to the highest-income classes or the product of ingenious accountants or attorneys. The typical tax expenditure primarily benefits middle and lower-income groups.

Nor are the major benefits obtained by engaging in unusual activities. They are received in connection with such prosaic activities as paying state and local taxes, owning a home, and working for a company that provides group insurance and other extra benefits.

To be sure, not all tax expenditures are of this nature—and not each one needs to be defended. But the entire category should not be condemned.

All in all, tax incentives may, in this imperfect world, often be the most realistic economic method of strengthening the country. □

DR. WEIDENBAUM, a former Assistant Secretary of the Treasury, is director of the Center for the Study of American Business at Washington University. This article is based in part on a paper presented to the ITT Key Lecture Series conducted at the University of Michigan Graduate School of Business Administration.

Changes Ahead in the Civil Service System?



Consumer Product Safety Commission Chairman S. John Byington says the Civil Service system is too rigid.

NOT MUCH more than a year ago, candidate Jimmy Carter was talking about revamping the federal bureaucracy and making it more efficient.

President Jimmy Carter any day now is going to decide what to do about a set of proposals that his Civil Service Commission chairman thinks just may achieve those goals.

If the proposals do what it has been intimated they will do, the Civil Service Commission would go out of business and be replaced by two new agencies.

Also, a new category of high-level federal managers would be created.

Critic of the system

These steps might or might not halt growing criticism of the present government bureaucracy.

But, as one critic within government says, the problem with Civil Service as it stands today is that there is doubt whether a government manager "is really going to be given an opportunity to manage."

This critic is S. John Byington,

chairman of the Consumer Product Safety Commission.

Mr. Byington believes the Civil Service Commission system, which oversees hiring, firing, and other personnel actions involving government employees, is simply too inflexible and does not give a manager leeway to make personnel decisions which will promote efficiency.

He made his position clear as a recent participant on the "What's the Issue" radio program, which is produced by the Chamber of Commerce of the United States for the Mutual Radio Network.

It took Chairman Byington upward of a year to restructure his agency. And with the changes came problems in the form of employee grievances.

"Just in trying to move people around and get organized," he says, "we've caused enough ripples that we're undergoing our fifth audit by the Civil Service Commission. And that ties everybody up."

Mr. Byington says he is not critical of all federal employees.

"I think that, as in any large organi-

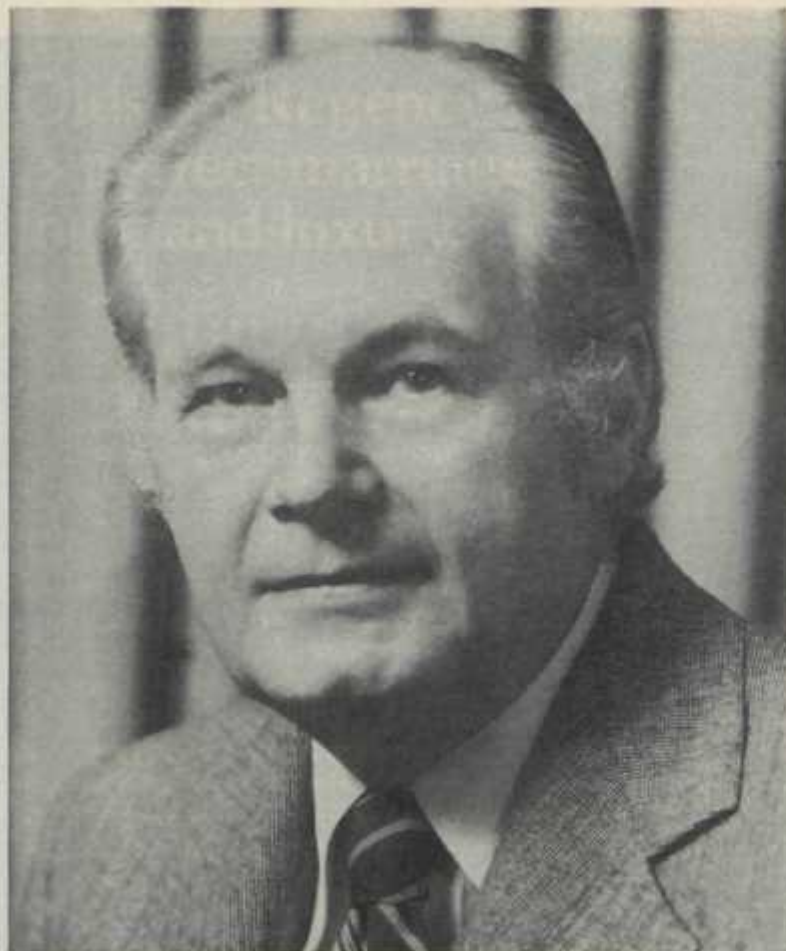
zation, probably a third of the people would be a success in anything they went into. Another third of the people give you a good, solid day's work. But the other third of the people are a disaster, and the sooner that they are gone, the better off everybody would be."

Other criticism

Mr. Byington is not alone in his criticism. News commentators, a large portion of the general public, and even other federal officials are critical of the bureaucracy and its watchdog, the Civil Service Commission. Few federal officials, however, criticize the system publicly.

One individual who does, perhaps not as vociferously as Mr. Byington, is Alan K. Campbell, chairman of the Civil Service Commission.

"There are problems with the system that need correcting," Mr. Campbell says, and he likens working with the system to "wrestling with a ten-ton marshmallow. Managers and employees alike are endlessly wrestling with a huge, cumbersome, and frustrating



Alan K. Campbell, Civil Service Commission chairman, is urging sweeping reorganizational changes.

mass of regulations and traditions; and too often the system wins the match rather than the people."

As CSC chairman, Mr. Campbell is a member of President Carter's Executive Committee for Reorganization and chairman of the Federal Personnel Management Project, a special task force to study and recommend simplification and other improvements in the federal personnel system.

"We believe that the federal personnel system in its present form cannot respond to the need to improve public service," Mr. Campbell says, adding that the system satisfies neither management, employees, nor public interests.

Three basic problems

To tackle Civil Service reorganization, he is addressing what he sees as three basic problems:

1. To increase management flexibility and remove obstacles to effective management.
2. To make merit system abuses more difficult.
3. To address and try to correct a

management view that the employee appeal process is biased toward employees and an employee view that the process is management-dominated.

He adds that another target is to streamline the system, which he says is "so encrusted with rules and regulations that too many managers feel it is almost impossible to take personnel actions."

"We did a series of case studies of the time it took to perform personnel actions and found that, in one sample, it took seven months to hire and between eight months and three years for various kinds of discipline."

Mr. Campbell says Civil Service regulations originated as a defense against the spoils system and the poor government that it provided, "but they now result in as much inefficiency as they were designed to prevent."

Protecting the merit system

His recommendations to President Carter address a number of areas.

One proposal would abolish the present Civil Service Commission and create a merit system protection board

and an office of personnel management.

The merit system board would hear appeals from federal workers, investigate abuses of Civil Service law, and hear complaints from—as a spokesman calls them—"whistle-blowers."

The office of personnel management would carry out the personnel functions of the commission, such as in the areas of retirement, health and life insurance, examination, training, and classification.

Ending dual role

At present, the same agency—the Civil Service Commission—which must carry out personnel actions of administrators is in charge of investigating alleged personnel abuses. The proposal for the two new agencies is designed to rectify this.

Another proposal is for creation of an executive management service, a cadre of high-level managers which would encompass Civil Service grades GS 16-18.

Mr. Campbell says grade and rank within such a cadre "would be assigned to persons rather than positions. The pay system would be one with freedom for management discretion within a limited range of salaries. There would be no automatic pay increases, but there would be a possibility for earning substantial bonuses."

"We believe the executive management service would give top management substantial freedom in assigning talented people to critical new program needs and in forming new units to help achieve the goals of that organization. It would be a new kind of flexibility for top managers in the federal government."

Action soon?

President Carter, if he chooses, will be able to make certain changes in the Civil Service system through executive action; however, congressional approval will be required for others. If the President acts soon, a CSC spokesman says, "we would hope to send recommendations to Congress in February or March."

Mr. Campbell observes: "Convincing all the relevant constituencies that there is need for change will be no easy task." □

"Let Us Produce for the People No Larger Government Than Their Needs Require"

—New York Gov. Hugh Carey

NEW YORK STATE has been viewed for years as an incubator for some of the more generous social programs in the nation. Each time one of those programs was launched or expanded, taxes on the private sector were raised to pay the bills.

In 1965, New York ranked second in state-local tax collections on a per capita basis and tenth per \$1,000 of personal income.

Today, a Tax Foundation survey of all states shows, New York is first in both categories.

State-local tax collections in New York in 1975 totaled \$1,025 per capita, compared with a national average of \$644. Collections per \$1,000 of personal income were \$167 against a national average of \$123.

The state income tax, with a top rate of 15 percent, is one of the highest in the nation.

Business leaders have long complained that state-mandated costs in the minimum wage and unemployment and workers' compensation areas, along with other regulation and taxes, have combined to discourage job-providing companies from locating or remaining in the state.

It was against that background that New York Gov. Hugh Carey, considered a pillar of the liberal wing of the Democratic Party, went before the opening session of his state legislature last month and declared:

"Let us produce for the people no larger government than their needs require. Let us pro-

duce the means for greater growth in jobs and income for our people. . . . We challenge the idea that governments always get larger and cost more."

What happened?

New York, along with some other states that have pursued similar policies, is learning that two fundamental policies governments have pursued in recent years are contradictory.

One policy is to increase the tax burden on business, as well as individual taxpayers, to finance the costs of social legislation. The other course is to make it more difficult, through excessive regulation, for business to operate—and thus obtain the added revenues needed to pay the higher taxes.

New York has learned the hard way that the private productive sector is the only source of the revenues that make it possible for all the rest of society, including government, to function. If the ability of that sector to operate is impaired, then all the rest of society, including government, suffers accordingly.

The experience of New York and other states now seeking to rebuild a favorable business climate provides a grim example to Congress of what can happen when government hobbles the productive sector in the name of achieving social goals.

At the end of such a road, there is no longer any productive sector—nor a viable society to worry about. □

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